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ABSTRACT

This publication is designed for use by managers of community-based nutrition programs. The training modules included in this manual were produced and field-tested by the Centre for Development and Population Activities (CEDPA) as a special project providing focused technical assistance and project support to CEDPA training graduates. CEDPA provides management training and technical assistance to managers of family planning, and health and development programs in the Third World. This training package is divided into three modules, each containing a series of units on specific but related topics. The units are divided into session plans, handouts, reference materials, and training exercises. The first part provides up-to-date information about the nutrition and health problems of women and young children. Its objective is to promote and enable trainees to manage six basic community nutrition activities: growth monitoring, breastfeeding, home and village food production, oral rehydration therapy, immunization, and family planning. Part two focuses on developing trainee skills in nutrition project planning, including selection of interventions, work planning, budgeting, and proposal writing. The final part is designed to assist trainees to develop plans and instruments for managing critical elements of community nutrition programs: i.e., training field workers and community volunteers; supervision of nutrition workers and community activities; and the monitoring and evaluating of service delivery activities. (JD)

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Community Nutrition Action for Child Survival

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COMMUNITY NUTRITION ACTION FOR CHILD SURVIVAL

Prepared by

Centre for Development and Population Activities

Peace Corps
Information Collection and Exchange
Reprint R-72
January 1989

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INTRODUCTION

Community Nutrition Action for Child Survival is designed for use with managers of community-based nutrition programs. The training modules included in this manual were produced and field-tested by The Centre for Development and Population Activities (CEDPA) in conjunction with its Nutrition Management Training Project, a special project providing focused technical assistance and project support to CEDPA training graduates. Module production and the activities of CEDPA's Nutrition Management Training Project are funded under Grant DAN 1010-G-SS-1033-00 from the Office of Nutrition, Agency for International Development.

The Centre for Development and Population Activities, incorporated in 1975, is a private, non-profit organization that provides management training and technical assistance to managers of family planning, health and development programs in the Third World. To this end, CEDPA conducts two workshop series annually in Washington, D.C.; "Women in Management: Planning and Management of Service Delivery Programs in Family Planning, Health and Development," and "Supervision and Evaluation as Management Tools." In addition, CEDPA works through its worldwide network of alumni to conduct in-country training programs that lead to the development and implementation of innovative community service delivery programs.

Following this model, CEDPA's Nutrition Management Training Project provides training and technical assistance specifically to CEDPA alumni who have the potential to develop, expand or improve community nutrition programs in their own countries. Project assistance includes funding and technical input for nutrition training workshops, as well as follow-up technical assistance and funding for innovative demonstration projects.

Since the program began in 1981, CEDPA has provided nutrition management assistance to program managers in Kenya, Nepal, Indonesia and Senegal. The materials contained in this volume were developed and field-tested during the course of training and technical assistance in each of these countries.

CEDPA wishes to acknowledge the invaluable contribution made by our counterpart organizations and field resource experts to the production and field-testing of these training modules. It is through their input and feedback that CEDPA is able to present this volume for adaptation and use by other managers and organizations. Individuals and organizations contributing to this effort have included:

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(*Graduates of CEDPA's Washington training program.)

CEDPA also wishes to acknowledge the support and guidance from the Office of Nutrition, Agency for International Development. Special thanks to Dr. Martin J. Forman, Director, and Nutrition Advisors Dr. Chloe O'Gara and Dr. Tina Sanghvi.

Development and field-testing of Community Nutrition Action for Child Survival was coordinated by CEDPA Nutrition/Health Coordinator Pat Taylor. Ellen Dreyer was responsible for editing the manual.

HOW TO USE COMMUNITY NUTRITION ACTION FOR CHILD SURVIVAL

This training package is divided into three modules, each containing a series of units on specific but related topics. Module units are further divided into session plans, handouts, reference materials and training exercises.

Training modules are designed to:

Part I

- Provide up-to-date information about the nutrition and health problems of women and young children

- Promote and enable the trainees to manage six basic community nutrition activities: growth monitoring, breastfeeding, home and village production of weaning foods, oral rehydration therapy, immunization and family planning

Part II

- Enable trainees to diagnose and work with the community to solve nutrition problems

- Develop trainee skills in nutrition project planning, including selection of interventions, work planning, budgeting and proposal writing

Part III

- Assist trainees to develop plans and instruments for managing critical elements of community nutrition programs: i.e. training for field workers and community volunteers; supervision of nutrition workers and community activities; and monitoring and evaluation of service delivery activities.

The three training modules can be adapted and used in their entirety to facilitate the development and successful management of community nutrition projects. Alternatively, modules and training units can be used separately in a variety of training and project development situations. Portions of this volume have been used in a variety of training situations in Kenya, Nepal, Indonesia and Senegal to:

- Improve nutrition intervention skills
- Improve the supervision of community nutrition activities
- Improve the coordination of community nutrition activities by health, nutrition, social service, family planning and agricultural extension workers

- Develop or improve planning and management skills
- Generate nutrition project plans and proposals
- Train nutrition field workers and volunteers
- Train trainers of nutrition field workers and volunteers
- Prepare for project evaluations.

Participatory and experiential training methodologies are suggested throughout these modules to facilitate learning and the development of problem-solving, planning and communication skills.

Adaptation of training materials is critical. Trainers and resource specialists familiar with local nutrition problems and programs and training techniques, should review and adapt all materials prior to their use in training workshops. Adaptation will include:

- Selecting training topics and exercises to match local training objectives, schedule and resources
- Organizing topics and exercises in logical sequence
- Modifying session plans, handouts, and reference materials to fit local language, customs, problems, etc. This includes developing locally appropriate case studies, etc.
- Adding training content and developing additional exercises if necessary
- After using the adapted training materials, evaluating and making recommendations for further modifications to improve future training.

CEDPA expects that you will find Community Nutrition Action for Child Survival a useful tool in your work. We welcome your feed-back and suggestions for they will be useful for future editions of this manual.

PART I

COMMUNITY NUTRITION PROBLEMS AND INTERVENTIONS

UNIT 1

THE NUTRITION OF WOMEN AND CHILDREN

SESSION 1: What is Malnutrition?

SESSION 2: Focus on the Nutrition of Women and Children

SESSION 3: Important Causes of Malnutrition in Women and Children

SESSION 4: Community Nutrition Action for Child Survival

SESSION 1: WHAT IS MALNUTRITION?

Most trainees will have been exposed to basic nutrition principles in their work. This introductory session is intended as a review; however, it may include information new to some trainees. You should develop the session content based on a pre-training assessment of the trainees' knowledge about the nutrition of women and children.

Purpose:

Participants will discuss general nutritional requirements for growth and development. **Inadequate diet** and **illness** will be defined as the primary causes of malnutrition in individuals.

Time: 1-3 hours

Materials:

- Flipchart and marking pens
- Slides and projector or posters showing the symptoms of severe malnutrition
- Handout - "Malnutrition"

Steps:

1. Read the statement below to the group, or substitute statements about malnutrition in your country. Ask trainees to think about the statement for a few seconds.

   > "About 17 million of the world's children under five years old died last year; more than 12 million died from diarrhea, pneumonia, and contagious infections. Malnutrition was an underlying cause in all of these deaths."
   > UNICEF, A Child Survival Revolution, 1983

2. Ask trainees: "What is malnutrition?"
   Write the answers on the flipchart. Encourage as many answers as possible. The list will often include effects and causes, as well as definitions of malnutrition.

3. Referring to the trainees' answers in 2. above, give the definition of the term "malnutrition" as it will be used throughout the workshop:

   > Example: "Malnutrition is the physical and mental disability that results when the human body does not get the nutrients it needs to grow and function properly."

4. Review the basic nutrient requirements for growth and development. Explain the classification of foods according to their primary functions in the body (use the Basic Three Food Groups or the system of classification used in your country). In groups without nutrition background, conduct an exercise in which trainees practice classifying local foods or pictures of local foods according to their primary functions in the body, e.g., Basic Three Food Groups.

5. Ask: "Why do people become malnourished?" Trainees will give a variety of answers. List their answers on the flipchart; then summarize by saying:

> "We can see that there are many reasons people become malnourished. We will be talking about many of the causes of malnutrition during this workshop. In this session, let us begin by talking about the biological causes of malnutrition in the individual."

6. Explain that the physical causes of malnutrition are:

- inadequate diet
- not eating enough food; not eating enough of certain kinds of food (e.g., foods from each of the three food groups);
- illness.

7. Explain how illness can cause malnutrition by:

- reducing the amount of food eaten;
- reducing the intestine's ability to absorb (use) the food eaten;
- increasing the body's demand for available nutrients.

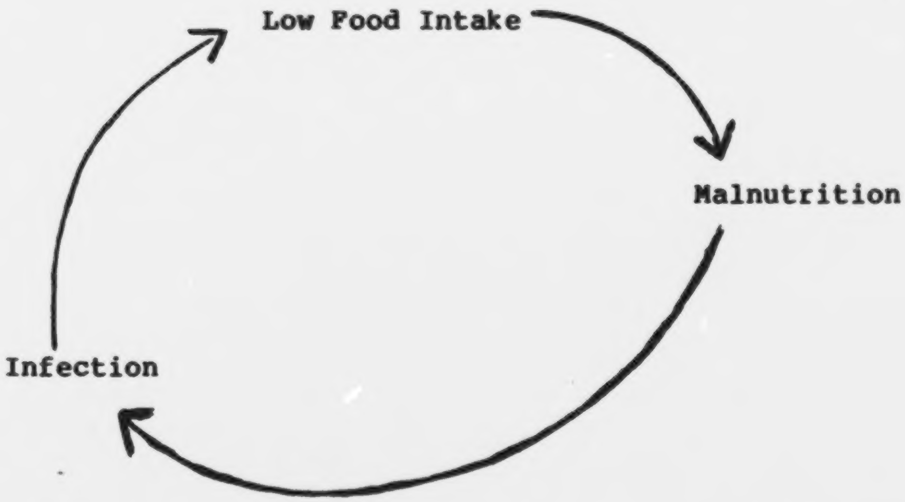
Describe the body's reaction to specific illnesses (i.e., diarrhea, measles and parasitic infections) and how they affect food intake and use by the body.

8. Draw the cycle of malnutrition-infection to illustrate the following points.

- Malnutrition weakens the body, making it more susceptible to illness, so people who are malnourished get sick more often.

- Illness often reduces nutrient intake at a time when the body needs more nutrients than normal to fight infection.

- Repeated illness complicates and intensifies malnutrition.



9. Ask trainees to brainstorm the signs and symptoms of malnutrition. When they finish, add any additional physical signs and divide the signs into those related to Protein Energy Malnutrition (PEM) and those related to specific vitamin and mineral deficiencies. You may wish to illustrate the signs of severe malnutrition using slides or posters. Remind trainees that these different types of malnutrition often occur together.

10. Summary

"In this session we have seen that malnutrition is the result of:

- **not eating enough food;**
- **not eating enough of certain kinds of foods;**
- **illness.**

In the next activities, we will be analyzing the nutrition problems of women and young children and identifying community activities that address the immediate causes of malnutrition."

Distribute the Handout - "Malnutrition" as a reference.

MALNUTRITION

Malnutrition has been identified as one of the world's most serious health problems and a major cause of death in infants and young children. Last year 17 million children under five years of age died throughout the world: 12 million of them died from diseases directly related to malnutrition. (UNICEF, A Child Survival Revolution, 1983)

What is Malnutrition?

Malnutrition is the physical and mental disability that results when the body does not get the nutrients it needs to function and grow. The body gets nutrients from foods. Foods contain different combinations of nutrients, so the body needs different kinds of foods to meet its nutrient requirements. The functions of food in the body can be divided into three categories - building and repairing the body's tissues, providing energy and strength, and maintaining or protecting the body from illness.

The Basic Three Food Groups

In order to understand the combinations of foods necessary for growth and health, we often divide the foods according to what they do in the body. A common system for classifying foods is the Basic Three Food Groups. (There are also systems for classifying foods by function and nutrient content that include four, five and six classifications.)

The Basic Three Food Group System divides foods into Body-Building, Energy and Protective categories.

Body-Building Foods (protein) are used by the body for growth and repair of tissue. These foods are very important for everyone, but they are most important for young children who are growing very rapidly and for pregnant and breastfeeding mothers who are nourishing growing babies as well as themselves. The Body-Building Foods include milk, eggs, legumes, fish, meat, poultry, nuts, etc.

Energy Foods (carbohydrates and fats) are those that help us do all of the things we must do every day, i.e., work, walk, play, etc. These are very important foods and they usually make up the bulk of the diet. Energy Foods include cereal grains, roots and tubers, fats and oils, sugars, etc.

Protective Foods (vitamins and minerals) are those that help keep the body free from sickness and functioning properly. These foods include fruits and vegetables, especially dark green and yellow vegetables and fresh fruits.

The body needs some of each of these kinds of food every day to stay healthy. There are also special times when the body needs more food than normal to grow and stay healthy. These include periods of **rapid growth, sickness and heavy physical labor.**

What Causes Malnutrition?

When the body does not get enough of the foods it needs; when it does not get the right combinations of food; or, when illness affects the body's ability to use foods properly, a person may become malnourished.

Diets may be deficient in the quantity and the quality of food consumed. This means that the amount of food eaten and/or the nutritional value of the food is below the daily human requirement. The minimum nutrient requirement varies according to the age, size and reproductive status of the individual.

Protein Energy Malnutrition (PEM), one of the most serious nutritional problems, is caused by inadequate intake of body-building and/or energy foods and is usually accompanied by nutritional anemia. Kwashiorkor and marasmus are two types of PEM.

Vitamin and Mineral Deficiencies also cause malnutrition. Anemia (iron), xerophthalmia (vitamin A), rickets (vitamin D) and goiter (iodine) are related to vitamin or mineral deficiencies. Some of these vitamin and mineral deficiencies also occur with protein energy malnutrition.

Illness affects the body's ability to digest and use food, as well as the amount of food eaten. Diarrhea is a good example of an illness that causes malabsorption as well as reduced intake of food. When diarrhea occurs, the intestine is unable to absorb many of the nutrients contained in the food. If the person with diarrhea is feeling unwell, or if there is vomiting, there will also be less food eaten than normal. In some cultures, children with diarrhea may also be taken off food during bouts of diarrhea. Because the body actually requires more nutrients than normal to fight infection, illnesses like diarrhea have a double impact on nutrition status.

What are the Effects of Malnutrition?

Malnutrition causes growth failure, increased risk of infection, physical changes in the body, illness, disability and death. Malnutrition impairs the body's defense systems for fighting infection, meaning that the malnourished become sick more often and suffer more from their illnesses than the well-nourished. This vicious cycle of malnutrition and infection leads to reduced productivity of workers, high drop-out and repeater rates among school children, a greater demand for health and hospital care, high expenditures by the government and waste of human life.

SIGNS AND SYMPTOMS OF MALNUTRITION

Type	Signs	Deficiency
***PEM-Kwashiorkor**	Hair changes "Flaky paint" rash Swelling (edema) Irritability Moonface	Lack of Body-Building and Energy Foods
***PEM-Marasmus**	Wasting "Old man" look Listlessness Skin hanging on bones	Lack of total food intake
Common Vitamin/Mineral Deficiencies	Night blindness Bitot's spot Xerophthalmia Blindness	Lack of vitamin A
	Pale conjunctiva (eye) Fatigue Dizziness Pale mouth and tongue	Lack of iron
	Notched ribs Bowed legs	Lack of vitamin D
	Enlarged thyroid Goiter Cretenism	Lack of iodine

* These are signs of severe forms of malnutrition. In most cases, people showing these signs have been malnourished for a long time. Although they may not have had visible physical signs of malnutrition, they may have experienced fatigue and sickness. In children, the first sign of malnutrition (PEM) is **failure to grow.**

SESSION 2: FOCUS ON THE NUTRITION OF WOMEN AND CHILDREN

Purpose:

To describe critical events during pregnancy, breastfeeding and weaning that place women and children at high risk of malnutrition. To illustrate the relationship between malnutrition, infection and child spacing.

Time: 1-2 hours

Materials:

- Newsprint and marking pens or chalkboard and chalk
- Wall chart - "Stages of Fetal and Infant Growth"
- Handout - "Stages of Fetal and Infant Growth"
- Handout - "Focus on Women and Children"

Steps:

1. Ask trainees: " Who suffers most from malnutrition?" List their answers on the flipchart. Then explain that poor women and children under three years suffer most from malnutrition in both normal and disaster situations because of their special nutritional needs and susceptibility to diseases that can lead to malnutrition.

2. Display the chart - "Stages of Fetal and Infant Growth." Review the characteristics of pregnancy, early infancy and weaning in terms of the nutritional requirements and common illnesses and problems at each stage.

   Use the table on the next page to prepare your presentation.

HANDOUT

STAGES OF FETAL AND INFANT GROWTH

Stage	Nutritional Requirements	Common Symptoms
Pregnancy	- 350 extra calories per day or about 1/2 extra plate of food each day* - green leafy vegetables and meat to prevent anemia - weight gain of at least 12.5 kg	- anemia - inadequate weight gain - low birth weight (<2500 grams) - premature delivery - maternal depletion
Breastfeeding (0-6 months)	Mother: - 550 extra calories per day or about one extra plate of food each day extra liquids for the breastfeeding mother Child: breastfeeding should begin immediately after birth (give colostrum) - breastfeeding should be on demand - breastfeeding for 4-5 months without supplements	- early introduction of foods other than breast milk leading to diarrhea and decreased production of breast milk - early termination of - use of feeding bottles leading to diarrhea and other infections
Weaning/ Breastfeeding (6 months - 2 years)	- begin giving semi-solid food by 6 months - give 4-6 small meals per day from 6 months to 2 years - continue breastfeeding - high energy/mixed diet	- inadequate weight gain - diarrhea - measles - other infections

* Calculation of additional caloric requirements are for a woman weighing 50 kg. Normal daily requirement is 2,000 calories; in pregnancy, calorie requirement increases to 2,350 calories; during the first six months of beastfeeding, it increases to 2,550 calories per day. Calculations for extra plates of food are based on the assumption that women eat three meals per day, under normal circumstances.

During the presentation, encourage trainees' participation in the following ways:

3. Emphasize the importance of a woman's health and nutrition to the health and survival of her child. Ask trainees to tell the group about cases of women they know who have been sick during pregnancy and how this affected the child.

4. Ask trainees: "What happens when an infant is not breastfed during the first year of life? Why do women stop breastfeeding?" Emphasize the role of maternal nutrition in successful breastfeeding. (This topic will be discussed in greater detail in a later session.)

5. Discuss the incidence and the effects of illness, especially diarrhea and measles, during the weaning period. Trainees should understand the need to deal with both illness and feeding habits to improve the nutrition of women and children.

6. Draw the chart below - **Effects of Birth Spacing on Child Survival.** Ask trainees to brainstorm reasons why large, poorly spaced families are more likely than smaller families to have malnourished children and children who die.

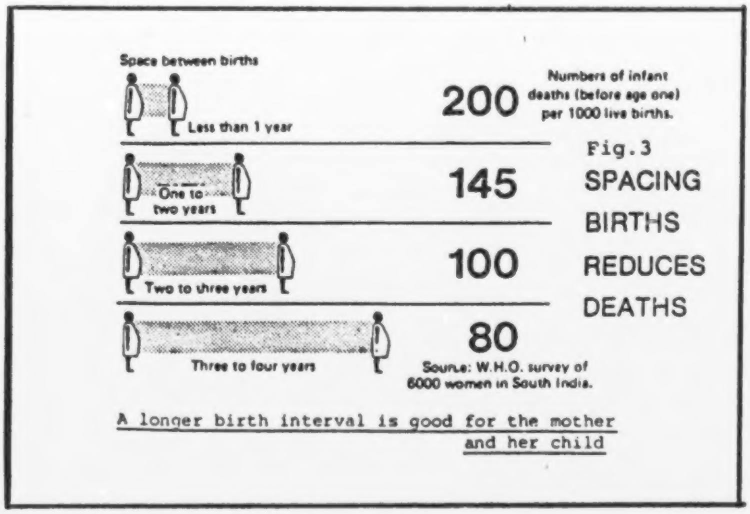


Fig.3

Source: W.H.O. survey of 6000 women in South India.

A longer birth interval is good for the mother and her child

Effects of Birth Spacing on Child Survival

7. To summarize this session, divide trainees into small groups (four-five persons) and ask the groups to agree on one important rule to improve nutrition for each of the topics discussed during this session:

- Pregnancy
- Breastfeeding
- Weaning
- Illness
- Birth Spacing

Each rule should improve some aspect of the nutrition status of women and/or children.

8. When groups finish, ask them to present their rules for improved nutrition. Rules might look like this:

    - Eat one extra plate of food every day during pregnancy.
    - Begin breastfeeding immediately after birth.
    - Do not give foods besides breast milk to infants under four months.
    - Breastfeed to prevent diarrhea.
    - Allow at least three years between the births of your children.

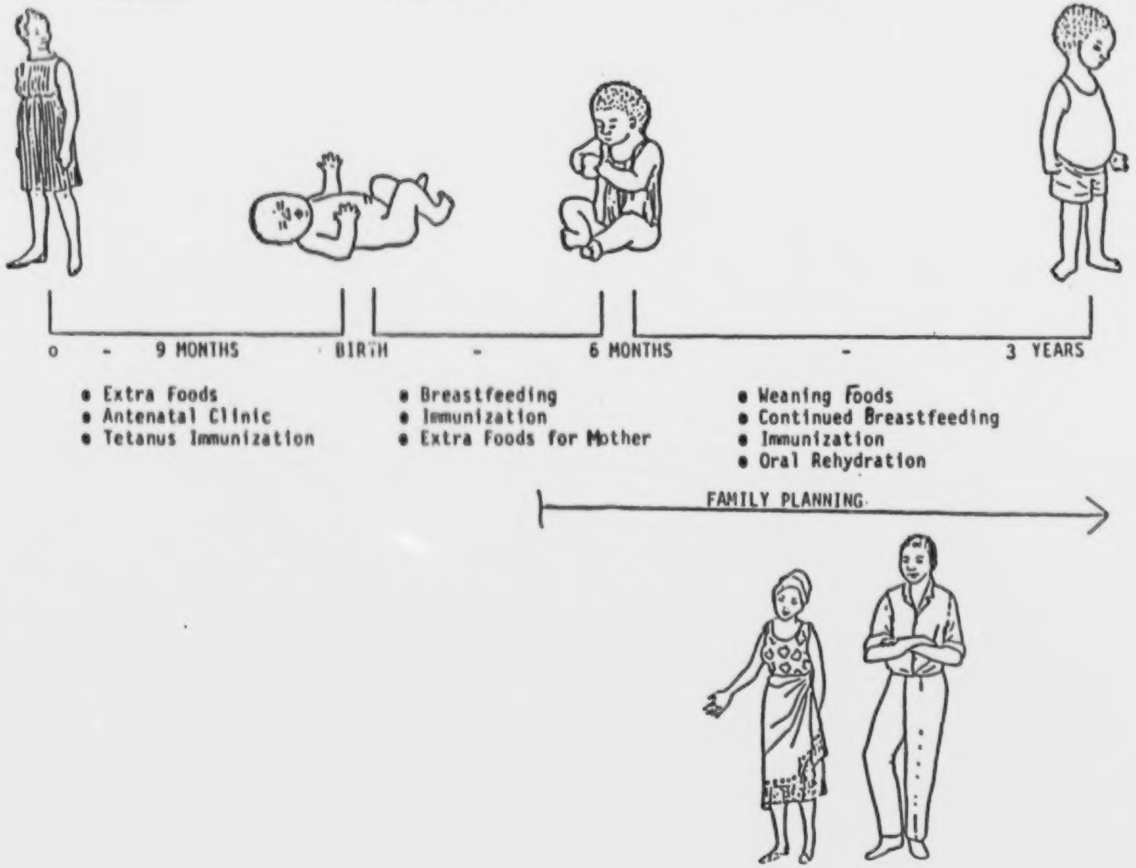
9. Close the session and bridge to the next:

    "In this session, we reviewed the reasons for increased risk of malnutrition during pregnancy, early infancy and weaning. As managers, we are concerned with using our limited resources to produce the best results possible. In order to do that, we must decide who needs our help the most and who will benefit the most from it. In nutrition and health care, we emphasize the needs of mothers and children and strategies for working with them because they are the ones who suffer the most from malnutrition."

    Distribute the Handout - "Focus on Women and Children" as a reference.

WALL CHART

STAGES OF FETAL AND INFANT GROWTH



PREGNANCY

EARLY INFANCY

WEANING PERIOD

0 - 9 MONTHS BIRTH - 6 MONTHS - 3 YEARS

- Extra Foods
- Antenatal Clinic
- Tetanus Immunization

- Breastfeeding
- Immunization
- Extra Foods for Mother

- Weaning Foods
- Continued Breastfeeding
- Immunization
- Oral Rehydration

FAMILY PLANNING

HANDOUT

STAGES OF FETAL AND INFANT GROWTH

Stage	Nutritional Requirements	Common Symptoms
Pregnancy	- 350 extra calories per day or about 1/2 extra plate of food each day* - green leafy vegetables and meat to prevent anemia - weight gain of at least 12.5 kg	- anemia - inadequate weight gain - low birth weight (<2500 grams) - premature delivery - maternal depletion
Breastfeeding (0-6 months)	Mother: - 550 extra calories per day or about one extra plate of food each day extra liquids for the breastfeeding mother Child: breastfeeding should begin immediately after birth (give colostrum) - breastfeeding should be on demand - breastfeeding for 4-5 months without supplements	- early introduction of foods other than breast milk leading to diarrhea and decreased production of breast milk - early termination of - use of feeding bottles leading to diarrhea and other infections
Weaning/ Breastfeeding (6 months - 2 years)	- begin giving semi-solid food by 6 months - give 4-6 small meals per day from 6 months to 2 years - continue breastfeeding - high energy/mixed diet	- inadequate weight gain - diarrhea - measles - other infections

* Calculation of additional caloric requirements are for a woman weighing 50 kg. Normal daily requirement is 2,000 calories; in pregnancy, calorie requirement increases to 2,350 calories; during the first six months of beastfeeding, it increases to 2,550 calories per day. Calculations for extra plates of food are based on the assumption that women eat three meals per day, under normal circumstances.

FOCUS ON WOMEN AND CHILDREN

Women and young children are more likely than most other groups to become malnourished because of the events in their lives that increase their nutritional requirements. The body demands extra food during periods of growth, physical work and illness. Women and young children often experience two or three of these conditions at the same time. In many communities, their needs for extra foods are not met.

The period of greatest nutritional demand on women and children begins at conception and continues through the fetal and infant periods until about three years of age. The periods that demand greatest food intake and the problems associated with them are:

Pregnancy

Pregnancy increases a woman's need for food. She is eating for two people, herself and the baby growing inside of her. If she does not eat the foods she needs, her baby may be born weak and sickly, and her own body and health may suffer. Even under optimal conditions after birth, infants who have been retarded in growth during fetal life sometimes continue to grow slowly for many years. They may also show a tendency towards poorer intellectual performance, compared with infants who grew normally before birth.

Mothers from poor sectors of society frequently have only an inadequate diet available and have very limited opportunities for proper antenatal care, including the prevention and treatment of anemia, malaria and other infections. This largely explains why lower birth weights are found in these groups. Poor diet may be caused by low income, inadequate food production, lack of knowledge about nutrition or food taboos imposed during pregnancy. Also, a woman's activity rarely decreases during pregnancy. Many women continue to till the soil, carry wood and water, and take part in other strenuous jobs until delivery.

To insure the best fetal growth and give every child a good start in life, it is important to prevent and treat infectious diseases and high blood pressure during pregnancy, and to make the mother and father understand the importance of a good and sufficient diet during pregnancy. In addition, both parents should understand the need to slow the mother's work pace, and so allow her to have sufficient rest before delivery.

Breastfeeding

Research has confirmed the universal superiority of mother's milk both nutritionally and from an anti-infective point of view. Breastfeeding is also valued for child-spacing and emotional bonding between mother and baby.

Breastfeeding should begin as soon after birth as possible. Colostrum, the first milk produced by the breasts after birth, provides important protection against infection as well as nutrients for the growing infant. To insure adequate breast milk production and growth of the infant, breastfeeding should be "on demand." Breast milk alone is sufficient for an infant from birth through four to six months of age. Breastfeeding should continue as long as possible (2-3 years) to provide continued protection from illness and important nutrients for growth and development.

Good maternal nutrition is important during the breastfeeding period. Additional food and liquids should be consumed as in pregnancy. If the breastfeeding woman's diet is inadequate, she may become weak. The quality of breast milk also depends on the adequate nutrition of the mother and, of course, the quality of breast milk affects the growth of the infant.

The declining pattern of breastfeeding is one of the world's most serious nutrition problems. It has been estimated that some 10 million cases of infant marasmic diarrhea occur in developing countries each year, many as a result of early termination of breastfeeding and introduction of feeding bottles and breast milk substitutes.

Weaning

From six months to two years of age, breastfeeding should continue, but a growing child also needs to eat other foods in sufficient quantities to meet his body's requirements. This is called the weaning period when new foods are gradually added to the infant's diet. It is a critical period in the life of the child, because new foods and exposure to contaminated foods, water and utensils mean that weaning age children are more likely to become sick from diarrhea and other infections. This is also a period of rapid physical and mental development. If children are not given sufficient amounts of food and a diet rich in body-building, energy and protective foods during these critical years, they will stop growing. They may become sick more often than well-nourished children, and some will die. Those who live, but have been severely malnourished during this period, may never reach their physical and mental potential during life.

Infection and Malnutrition

One of the greatest dangers of the weaning period is the change from sterile breast milk to animal milk, semi-solid and solid foods, which are often acquired, stored and fed in unsanitary conditions. The weaning process is associated with the highest rate of infection, particularly of the gastrointestinal tract, that the child will experience in its entire lifetime. Infections, in turn, prepare the way for malnutrition and increase the negative effects of an inadequate diet.

Diarrhea is the most common infection of the weaning period; it is also the disease that kills more children in the world today than any other. A malnourished child will get diarrhea an average of four times as often and is also more likely to die from a diarrheal infection than a well-nourished child.

Measles, tuberculosis, malaria, whooping cough and parasitic infections also have very detrimental effects on young children during infancy and weaning. These illnesses are both made more serious by malnutrition and can contribute to malnutrition. Immunization and improved nutrition are the keys to preventing measles, tuberculosis, whooping cough and other serious childhood illnesses that can cause and make malnutrition worse.

Child Spacing and Malnutrition

The amount of time between births is very important for the health of women and children, as is the total number of births in a woman's lifetime. Infants are more likely to survive if at least three years are allowed between births. This gives a woman's body the chance to rest after pregnancy and breastfeeding, before beginning this demanding cycle again. Adequate spacing between births helps to avoid depletion of the woman's body and deprivation of the growing fetus.

Spacing also reduces the total number of births and increases each child's share of family resources, especially food. Children from smaller families with several years allowed between births are generally better nourished, better educated and more productive than those from large, poorly spaced families.

SESSION 3: IMPORTANT CAUSES OF MALNUTRITION IN WOMEN AND CHILDREN

In Sessions 1 and 2, we discussed the biological causes of malnutrition and the special nutritional risks of women and young children. We know that a few simple practices (i.e, improved feeding, immunization, treatment of diarrhea and child spacing) could improve nutrition and save many lives. However, it is not always easy to spread and gain acceptance for these practices. Malnutrition is the result of complex socio-economic causes within the family and the community. Before we can promote improved nutrition practices, we must understand more about how and why people do things the way they do at present.

Purpose:

To explore the social, economic and cultural causes of malnutrition in women and young children.

Time: 2 1/2 hours

Materials:

- Flipchart and marking pens
- Handout - "A Story About Malnutrition"
- Handout - "Causes of Malnutrition in My Region"
- Trainer's Reference - "Socio-Cultural Causes of Malnutrition"

Steps:

1. Distribute the Handout - "A Story About Malnutrition." Read the "Story About Malnutrition" slowly, asking trainees to follow along as you read.

2. Ask trainees to re-read the story; then, ask them to list on a sheet of paper as many causes of malnutrition in the story as they can.

3. Now, ask trainees to state one cause at a time. List the mentioned causes on the flipchart. List each cause only once. Continue asking participants for causes until no new causes are given.

   Expect the following causes of malnutrition:

   - Family has rocky/infertile land
   - Family is large - five births/four living children
   - Elizabeth fed only starchy energy foods
   - Mother believes eggs are bad for children
   - Mother only takes children to health center when they are very sick

- Health care is far away from the village
- Mother does not know that lack of food is a reason for Elizabeth's sickness
- Belief that "evil eye" causes malnutrition
- Mother and grandmother have little time to care for young children
- Births have been spaced less than three years apart
- Drought sometimes destroys crops
- Frequent diarrhea

Explain that there are many interrelated reasons why women and children become malnourished.

Note: If the causes given by trainees are too general or vague, ask, "Why is that a problem?" until the answer given refers to a specific action, belief or condition causing the malnutrition.

For example:

- "People are poor" is a very general cause of malnutrition. It does not describe a situation that one could hope to change in a short period of time. "Ignorance" is another general reason that does not give us enough information.

- Two specific causes might be:

  "Body-building foods (eggs, legumes) are produced in the village, but people sell them and use the money to buy rice, a less expensive staple food."

  "Families do not know that their children's illnesses are caused by lack of food.

4. Invite a resource specialist to discuss the common causes of malnutrition in your country. Make sure the causes mentioned in the Handout - "Socio-Cultural Causes of Malnutrition" - are discussed.

5. Distribute the Handout - "Causes of Malnutrition in My Region." Ask trainees to answer the questions on the handout about the causes of malnutrition in their own regions. Facilitators should assist participants during this exercise.

6. Hold a question and answer summary of this activity in which the resource specialist responds to questions from trainees about the causes of malnutrition in their regions.

7. Summary

"Before we can introduce changes in nutrition practices in the community, we must understand how people perceive nutrition problems and the constraints they have to accepting new practices. Constraints are forces against change. If we understand the constraints to improved nutrition, we will be better able to develop educational messages and activities that community members can understand and accept."

A STORY ABOUT MALNUTRITION

This story is told by (Maria), a 30-year-old woman from the village of (_____). (Maria) is married to (John) and they have four small children. Last year (Maria's) fifth child died only a week after it was born. Now, (Elizabeth), the three year old, is sick with fever and a cough. Maria is very worried.

Maria: When my husband and I first came to (village) to live with his family, we had only one child, our oldest son (Peter). Now, (Peter) is nine years old, and he and his younger brother, who is seven, are studying in the village school. The two youngest children, (Jane) and (Elizabeth), are still very small. (Jane) is five and (Elizabeth) will soon be three.

Life has been difficult for us here in (village). Our land is rocky, and there are years when the rains come late and our crops fail. This year, my husband has been lucky to get work on a plantation about 40 km from (village). The money he earns on the plantation is little but with it we will buy rice this winter and seeds for next year's planting. While my husband is away, my mother-in-law and I must manage the house and the farming.

Today, I am very worried about my youngest daughter (Elizabeth). Poor little (Elizabeth), she has always been so thin and small. Now, she is coughing and coughing and she feels so hot. It seems as if God does not want her to stay with us for very long.

Last month, I took (Elizabeth) to the health center because she had very bad diarrhea. The health center is far and we must walk most of the way. I only take the children there when they are very sick and our own cures do not make them well.

At the health center, the nurse gave me some packets for the diarrhea. She also told me that (Elizabeth) needed to eat more food and that I should give her eggs and milk or meat every day. The nurse was very nice, but what she told me did not make any sense. Where am I to get these special foods for (Elizabeth)? The only time my family eats meat is at feast time when a goat is slaughtered. The milk the old cow gives is very little and if I do not sell it, who will pay the school fees for my sons?

I have a few chickens, but I am afraid to give their eggs to (Elizabeth). Is it not true that eggs are very strong food for such a small child? They will certainly make her stomach hot and cause more diarrhea.

I do not understand why (Elizabeth) needs such special foods. The other children are thin but they are not sick like (Elizabeth). They eat the same foods we have always eaten, (rice and soup) in the morning and the evening.

My mother-in-law says that (Elizabeth) has been bewitched. I am beginning to believe that what she says is true. Next week, I will arrange a cure for (Elizabeth) with (Don Miguel). (Don Miguel) is our village healer; he is very wise and will know what to do to make (Elizabeth) healthy.

To the Trainer:

Adapt or rewrite this story based on the most common causes of malnutrition in your country or region.

Discussion Starter:

List as many possible causes of malnutrition in this story as you can.

CAUSES OF MALNUTRITION IN MY REGION

List all of the factors (beliefs, practices, social and economic conditions, etc.) that you feel are causes of malnutrition in women and children in your area. Be specific!

SOCIO-CULTURAL CAUSES OF MALNUTRITION

Factors affecting food availability and use within the family will determine how we go about introducing new ideas and practices to improve nutrition.

1. Traditional Beliefs and Food Habits

Every culture in the world has beliefs about food and certain practices that affect the foods people eat. Some of these beliefs and practices help people to stay healthy; others can be harmful.

A belief or practice promotes good nutrition if it encourages people to eat a food which is good for them. For example, in many countries it is common for women when pregnant and after birth to follow food taboos that encourage them to drink additional liquids and eat body-building foods like chicken or meat. In Africa, one traditional practice involved abstinence from sexual intercourse until a child could walk to his father carrying a plate of food (two-three years). This allowed the child to benefit from his mother's attention and, most importantly, from breastfeeding. It was also an effective method of family planning. It is important to remember that even if a belief seems to be unscientific, if it means extra food for someone who needs it, then the belief and practice should be encouraged.

Beliefs or practices which block foods from women and children are harmful and should be discouraged through education and example. These include any beliefs or practices that restrict foods or liquids from:

- pregnant and breastfeeding women;
- anyone with diarrhea, especially a young child;
- weaning-age children;
- anyone who is sick.

Some specific examples include:

- Trying not to eat during pregnancy so that the baby will be small and the delivery easy
- Not giving colostrum to newborn infants
- Withholding specific foods from children because they are believed to result in an illness like worms or a change in character
- Withholding food and water during diarrhea
- Feeding men and boys first or feeding them the largest portions

It is interesting to note that most food restrictions apply to those who need food the most - women, young children and people who are sick. These are the groups who most often become malnourished.

Beliefs about the causes of malnutrition in children also affect how families treat malnourished children and whether or not they will accept advice from outsiders. Most cultures have beliefs about what causes severe forms of malnutrition, and they often have a special name for the disease. Some groups believe that malnutrition comes from "the evil eye"; others believe an unfaithful husband or wife has caused it; still others believe that malnourished children have been contaminated by pregnant women or another malnourished child.

A thorough understanding of local food habits and beliefs is the key to working successfully with any community on nutrition problems. Remember:

- A belief or practice is considered helpful and should be supported if it encourages giving extra food and liquid, even if it is not based on scientific fact.

- Harmful beliefs and practices are those that restrict foods from the vulnerable groups.

- It is always best to encourage positive traditional beliefs and practices while trying to change harmful practices through education and example.

2. Food Supply

In rural areas, the amount and quality of a family's land, its income and its equipment affect the foods available for child feeding. The knowledge of farmers also affects the variety of foods they grow and their harvests. Environmental factors (i.e., rainfall, insects, etc.) have an effect on food supply, as does the demand for certain types of cash crops in the marketplace. In many areas, the switch from subsistence crops to cash crops has had a very negative effect on the amount and the kinds of food available in rural areas. A regular "hungry season" each year before the harvest can also be a serious problem. In urban and increasingly in rural areas, cash income is an important factor in a family's ability to buy food for child feeding that it does not produce.

3. Early Termination of Breastfeeding, Use of Feeding Bottles

This has become a problem in developing and developed countries in recent years. Urban areas, as well as some rural areas, are increasingly bombarded with advertising promoting the use of feeding bottles and infant formulas. Middle- and upper- class women who have tended to accept this advertising are poor role models for their rural and less advantaged "sisters." The lack of financial resources needed to purchase breast milk substitutes, the lack of clean water in most areas and poor environmental hygiene combine to make bottle feeding a deadly practice. All mothers should be encouraged and helped to breastfeed their infants; those who cannot breastfeed should be taught hygienic practices and the use of cup and spoon for feeding their small children.

4. Time Available for Child Care and Feeding

This is one of the factors that is often overlooked when thinking of child health and nutrition. In most societies, the mother is the individual responsible for the care and feeding of the family's young children. She is often responsible for a variety of other tasks at home, in the fields and in the marketplace as well.

We know that young children must eat more frequently during the day than older children and adults (four-five meals per day). If family meals are normally prepared only twice each day, it may be difficult for a mother who is working in the fields, gathering firewood and food for the animals or fetching water to feed her young children as many times each day as she should. To save time she may feed the baby foods that are of the same consistency as those of the adults, or the baby may be given to an older sister who is sharing a bowl with the rest of the children while trying to feed herself and the baby.

5. Women's Health

It is estimated that about half of non-pregnant and two-thirds of pregnant women in the developing world suffer from iron-deficiency anemia (WHO 1979). Anemia affects a woman's ability to care for herself and her young children because it makes her feel tired and weak. Anemia during pregnancy and breastfeeding can have serious effects on unborn or breastfeeding infants. Other common conditions that affect a woman's ability to care for herself and her young children include malaria, gastro-intestinal disorders and parasitic infections. The availability of health care services can be critical not only to the health of women but also to the health and nutrition of their children.

6. Women's Status and Education

Attitudes toward women's roles in the family and in society affect all aspects of their lives, including diet, work, education and access to health care. Increasing women's education and income can have very positive effects on their decision-making roles in the family and on the nutrition and health of their children.

7. Large Families, Poorly Spaced Births

All of the problems of food availability and time for child care are worsened when there are many children to feed and care for. In addition, a woman who has had many pregnancies (more than five) has a good chance of being sick herself, with little energy to meet the demands of her family.

Traditional beliefs play an important role in determining family size and spacing of births. Attitudes toward male and female roles, the value of male children and children as security in old age are important. Competition between wives in polygamous situations also affects family size.

8. Accessibility of Health Information and Services

Preventive and curative health care facilities are often located at a distance from the rural village, implying a long walk and/or transport costs. Women may have little time to participate in the activities of the health center even when activities and health workers are located at a reasonable distance. Health information may not be available to families for the same reasons given above or because ethnic and class barriers make it difficult for them to seek and understand such information.

SESSION 4: COMMUNITY NUTRITION ACTION FOR CHILD SURVIVAL

Purpose:

To introduce six community-appropriate nutrition and health interventions that can reduce malnutrition and improve child survival through growth monitoring, promotion of breastfeeding, improved weaning practices, oral rehydration therapy, immunization and family planning.

Time: 1/2 hour

Materials:

- Handout - "Community Nutrition Action for Child Survival"
- Trainer's Reference - "Estimates of Child Survival through Intervention"
- Newsprint and marking pens

Note: This session can be used as an introduction to the following units in Part I of this module.

Steps:

1. Introduction: In the previous sessions we discussed the many causes and effects of malnutrition in women and children. What can be done to improve nutrition and thus, the survival and quality of life for women and young children? There are probably as many ways to improve nutrition as there are causes of malnutrition. Some interventions are more expensive and more time consuming than others. Some require highly trained "experts." Many, however, can be carried out by community members and families if they are given only a little training and support.

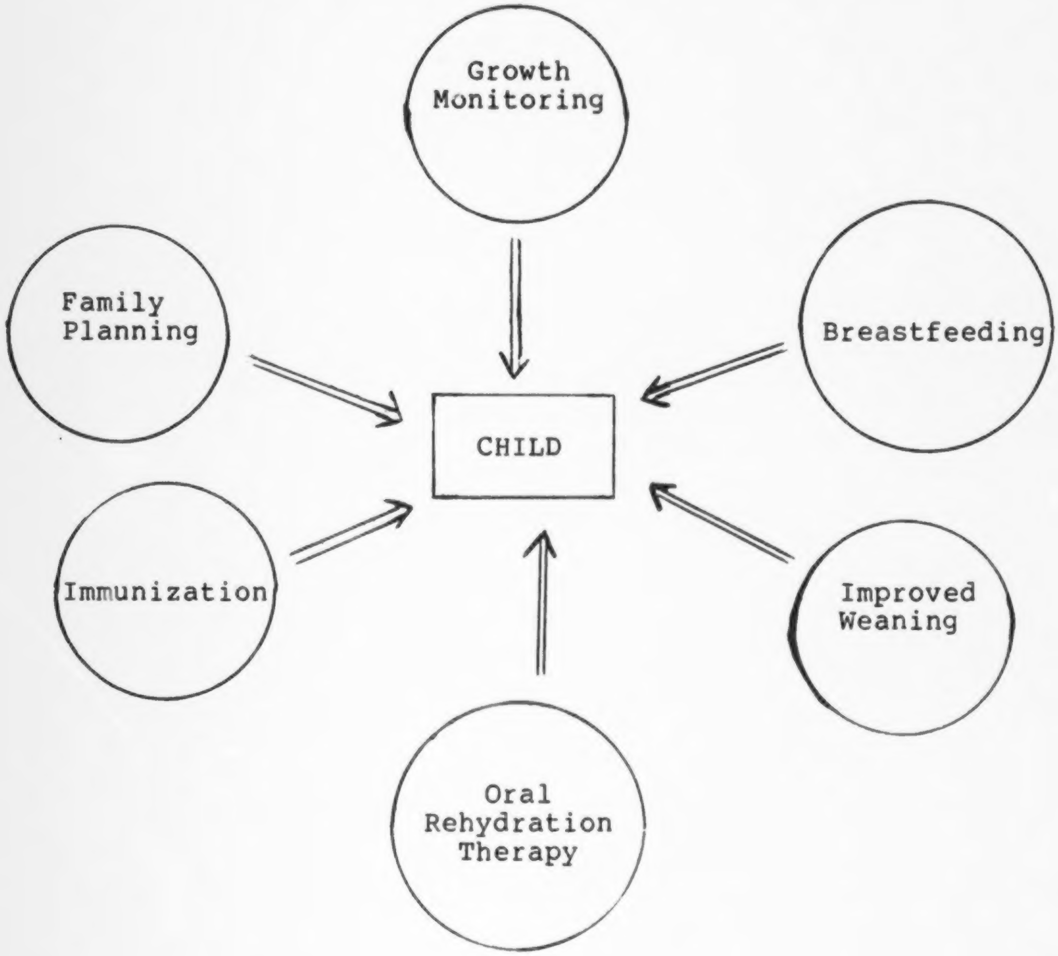
   What are these community nutrition interventions?

2. Distribute the Handout - "Community Nutrition Action for Child Survival." Review each of the six interventions with the trainees. These interventions and the roles that community members can play in their introduction will be covered in detail in the following units.

3. Use the UNICEF estimates of child lives that could be saved each year to demonstrate the dramatic effect that these simple interventions could have on child survival.

HANDOUT

COMMUNITY NUTRITION ACTION FOR CHILD SURVIVAL


Growth Monitoring
Family Planning
Breastfeeding
CHILD
Immunization
Improved Weaning
Oral Rehydration Therapy

ESTIMATES OF CHILD SURVIVAL THROUGH INTERVENTION

Disease/ Condition	Estimated No. of Deaths Per Year	Lives that Could Be Saved	Community Interventions
Malnutrition/ Low birth weight	3 million	1 million	- Growth monitoring - Maternal nutrition - Breastfeeding - Improved weaning - Family planning
Immunizable diseases	3.3-5 million	3-4.5 million	- Immunization
Diarrhea/ Dehydration	5 million	2.5-3.5 million	- Oral rehydration therapy
	13 million	9 million	

Adapted from UNICEF. "A Child Survival and Development Revolution."
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UNIT 2

MEASURING AND MONITORING GROWTH IN YOUNG CHILDREN

SESSION 1:	Measuring Growth
SESSION 2:	Arm Circumference
SESSION 3:	The Road To Health Chart
SESSION 4:	The Thinness Chart
SESSION 5:	Choosing A Growth Monitoring System
SESSION 6:	Counseling Referral and Follow-up of Malnourished Children

SESSION 1: MEASURING GROWTH

Purpose:

Trainees will review the measurements of growth in young children and their usefulness for identifying children at "high risk" of malnutrition.

Time: 1/2 hour

Materials:

- Flipchart and marking pens
- Handout - "Measuring the Growth of Young Children"

Steps:

1. Introduce this unit by reminding trainees that:

> "Community managers must look for ways to benefit the greatest number of people with their often limited resources. One way we do this in nutrition activities is by clearly identifying and focusing our efforts on children at "high risk" of malnutrition and death."

2. Ask trainees how they would define and identify "high risk" children.

Responses may include:

- Malnourished children
- Children from poor families
- Children whose mothers or fathers are absent
- Children who have physical signs of malnutrition
- Children who are sick

Summarize trainee responses by saying that there are many conditions and circumstances that may make children nutritionally "high risk." Growth failure is one of the most useful indicators we have for deciding whether children are at high or low risk of malnutrition.

Growth failure is the first sign of malnutrition.

3. List and discuss common measurements of growth appropriate for community use. Use the Handout - "Measuring the Growth of Young Children" to prepare and guide your presentation.

4. Explain why these measurements are compared with standard measurements for reference populations with normal and sub-normal nutrition status.

5. Explain the difference between single growth measurements and serial (repeated) measurements on the same child. Discuss the advantage of using serial measurements for early detection of growth failure.

6. Close the session by telling trainees that managers must choose which growth measurements and growth monitoring instruments are the best for use in their projects. A manager's choice often depends on the kinds of malnutrition common in an area, the workers' or volunteers' skills and the resources available for training and supervision.

   In this module, three instruments for measuring and monitoring growth are presented:

   - The three-color arm circumference measuring tape
   - The Road to Health Chart
   - The Thinness Chart

   These instruments have been used successfully in communities worldwide to identify "high risk" children. Besides providing useful measures of growth, they also promote the active involvement of parents and community leaders in the identification of "high risk" children and the causes of malnutrition in their communities.

MEASURING THE GROWTH OF YOUNG CHILDREN

Measuring a child's growth is one way of detecting malnutrition before the visible signs and symptoms of severe PEM become apparent. Healthy children grow very rapidly, especially in the first few years of life. Failure to grow is the first sign of malnutrition. If we can find children in the community who are not growing normally, we can take action to improve nutrition and prevent serious illness and, in some cases, death.

Growth can be measured and compared in several different ways:

Weight is the most reliable indicator of growth in young children. Changes in the weight of a healthy child can be detected every month from 0-5 years of age. To measure growth, we can (1) compare a child's **weight gain** over time, (2) classify a child's **weight for his age**, and (3) compare this measurement to a standard weight for children of the same age.

Height increases more slowly than weight in young children, but comparisons of **height-for-age** and **height-for-weight** can be useful measures. Height-for-age tells us about the past nutrition status of a child. Children who are "stunted," or shorter than normal children their age, have probably been chronically undernourished. Children who are too thin for their height when compared to normal children of the same height are "wasted" or currently malnourished.

Arm Circumference, or the distance around the middle of the upper arm, is another measurement of growth in children from 1-5 years old. In healthy children, arm circumference remains fairly constant between one and five years. When a child is malnourished, the arm circumference is reduced. By measuring arm circumference and comparing it to a standard for normal children, we can detect children who are currently malnourished, or "wasted."

In this module we focus attention on three growth assessment instruments that can be used by the community to identify children who are "in danger" of becoming malnourished and those who are currently malnourished and in need of immediate assistance. These are the:

- **Three-color arm circumference tape**
- **Road to Health Chart**
- **Thinness Chart**

SESSION 2: ARM CIRCUMFERENCE

Purpose:

Trainees will be able to make and use a three-color arm circumference measuring tape to identify moderately and severely malnourished children. They will discuss the advantages and disadvantages of arm circumference as an indicator of growth and the use of the three-color tape as a screening tool in the community.

Time: 1/2 hour (1 hour if arm tapes are made during the session)

Materials:

- Handout - "Measuring Arm Circumference"
- Materials to make three-color arm circumference tapes(X-ray film; plastic or any other material that will not stretch; scissors; ruler; green, yellow and red marking pens or paint; pencils)
- Flipchart and marking pens

Steps:

1. Distribute the Handout - "Measuring Arm Circumference" and explain that mid-upper arm circumference is a good indicator of malnutrition in children 1-5 years of age, because the size of the arm in a healthy child changes very little during this period. If the mid-upper arm becomes thin, this is a sign of malnutrition.

2. Distribute three-color arm tapes to the trainees and explain the reasons for the length of the colored areas on the tape. Or, help trainees make their own tapes following the instructions on the handout.

3. Demonstrate the correct method for measuring arm circumference using the tape. It is best to recruit a small cooperative child for the demonstration. Trainees should practice on a number of small children either during or after the session. Observe each trainee and correct any mistakes made using the tape.

4. Ask trainees to list the advantages of using arm circumference and the three-color tape in community nutrition action programs. These include:

   - Simple, fast
   - Easy for the community to understand and use
   - Good where people cannot read or write
   - Requires little training

5. Point out that the arm circumference tape:

   - is an excellent tool for finding out about the present nutrition status of children 1-5 years;
   - can only be used to detect malnutrition in children 1-5 years old;
   - does not tell us about past malnutrition;
   - while telling us which children are already malnourished, it is not a good tool for finding "high risk" children before they become malnourished.

HANDOUT

MEASURING ARM CIRCUMFERENCE

Mid-upper arm circumference is a useful indicator of the nutritional status of children 1-5 years old.

How to Make a Three-Color Arm Circumference Measuring Tape

1) You will need a strip of material that does not stretch (plastic is best).
2) Cut the strip about 20 cm long and 2 cm wide.
3) Mark the strip with fine vertical lines at 12.5 cm and 13.5 cm from one end of the strip.
4) Color the strip **red** from the end to 12.5 cm (use paint or felt pen that will not come off easily).
5) Color the strip **yellow** from the 12.5 cm mark to the 13.5 cm mark.
6) Color the strip **green** from the 13.5 cm mark to the other end.

Three-color arm tapes are available in some countries through UNICEF. They can also be ordered from the Voluntary Health Association of India, C-14 Community Center, SDA, Opp. IIT Main Gate, New Delhi 110 016, India. Insertion tapes marked in centimeters, instead of cut-off points, are also available.

How to Use the Three-Color Tape to Find "High Risk" Children

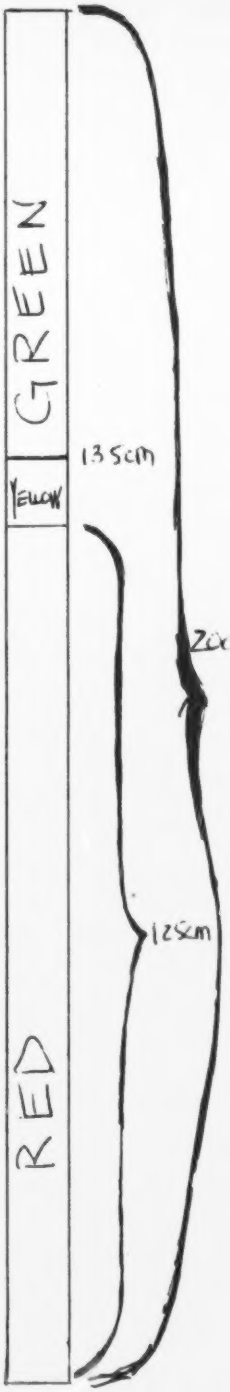
1) Only use the three-color strips with children 1-5 years old.
2) Place the strip around the middle part of the child's left arm. Find the middle of the upper arm by using the top of the arm and the tip of the elbow as the end points.
3) Which color is touched by the **red end** of the strip? Green, Yellow or Red?

What Do the Colors Mean?

Green - The child is well nourished.

Yellow - The child is "in danger" of becoming severely malnourished.

Red - The child is severely malnourished and in need of immediate attention.



What to Do for "Yellow" and "Red" Children?

Children with **yellow** and **red** arm circumference should be fed extra food every day, and they should be treated for any existing illness.

Children with **red** arm circumference are in danger of death. They need more food in 5-6 small meals a day. In these children, treatment of illnesses that may be causing or complicating malnutrition is extremely important. Families of severely malnourished children may also need temporary assistance to care for and feed their sick children.

Following-Up Malnourished Children

Arm circumference slowly increases as a child's nutrition improves. Use the three-color strip to monitor and evaluate the progress of malnourished children by comparing their monthly arm circumference measures.

Who Can Use the Arm Circumference Tape to Find and Help Malnourished Children?

Health workers, community leaders and parents can be taught to use the tape for screening and monitoring the growth of children in the community.

The three-color arm circumference strip is easy to use and understand. Because it can be used with both literate and non-literate groups, it is a useful tool for involving parents and the community in the health and nutrition of their children.

SESSION 3: THE ROAD TO HEALTH CHART

Many different types of growth charts are available for screening young children. The one presented in this session is the WHO Road to Health Chart which has been adapted for use in many parts of the world. The Road to Health Chart is an effective tool for monitoring a child's weight gain over time where regular weighing (monthly or bi-monthly) is possible. The purpose of the chart is early identification of growth failure so that action can be taken to prevent severe malnutrition. *

Purpose:

Trainees will practice completing and using the Road to Health growth chart to identify children with growth failure. They will also discuss probable causes of growth failure for different age groups.

Time: 2-3 hours

Materials:

- One sample Road to Health Chart for each trainee
- Wall-sized flannel graph or drawing of the Road to Health Chart (TALC)
- Road to Health Workbook for each trainee
- Weighing scale (a portable hanging scale with 100 or 500 gram divisions is best for community use)
- Several cooperative young children

Steps:

1. Introduce this session by telling trainees that changes in **weight** are the most sensitive indicators of growth and nutrition status in young children. Distribute a Road to Health Chart to each trainee. Explain that the Road to Health Chart is a screening tool that allows us to monitor a child's **weight gain** in order to find children who are becoming malnourished before they develop severe malnutrition.

2. Describe the features of the Road to Health Chart pointing them out on the wall-sized chart. (See Workbook, page 2)

3. Distribute a Road to Health Workbook to each participant. Use the workbook to complete the following steps:

---

* The WHO chart does not allow classification of nutrition status (i.e., normal, moderate and severe malnutrition). Charts using the Gomez or Harvard standards of weight for age are available for this purpose.

a. **Regular Weighing:** In order to use the Road to Health Chart for growth monitoring, we must weigh and record the weight of a child regularly (monthly, bi-monthly). Demonstrate how to weigh a young child using a portable scale that can be purchased or obtained locally. Review the points on page 5 of the Road to Health Workbook - "Accurate Weighing is Important."

b. **Calculating Age:** Weight is plotted together with age on the Road to Health Chart. It is only necessary to find out the child's age once, when the chart and the calendar are first filled out. In some areas, mothers do not know the ages or the birth dates of their children. Where this is true, a local-events calendar can be made relating events that people are likely to remember (i.e., festivals, holidays, political events, disasters, etc.) and seasons (summer, winter, rainy, maize, harvest, etc.) to specific months and years. Workbook Exercise 1 - "A Local-Events Calendar" should be completed by trainees during or after the session.

c. **Recording Weight for Age on the Road to Health Chart:** Using the wall-sized chart, demonstrate each step in completing a Road to Health Chart for the first time and for repeat weighings. Use page 9 of the workbook to guide the demonstration.

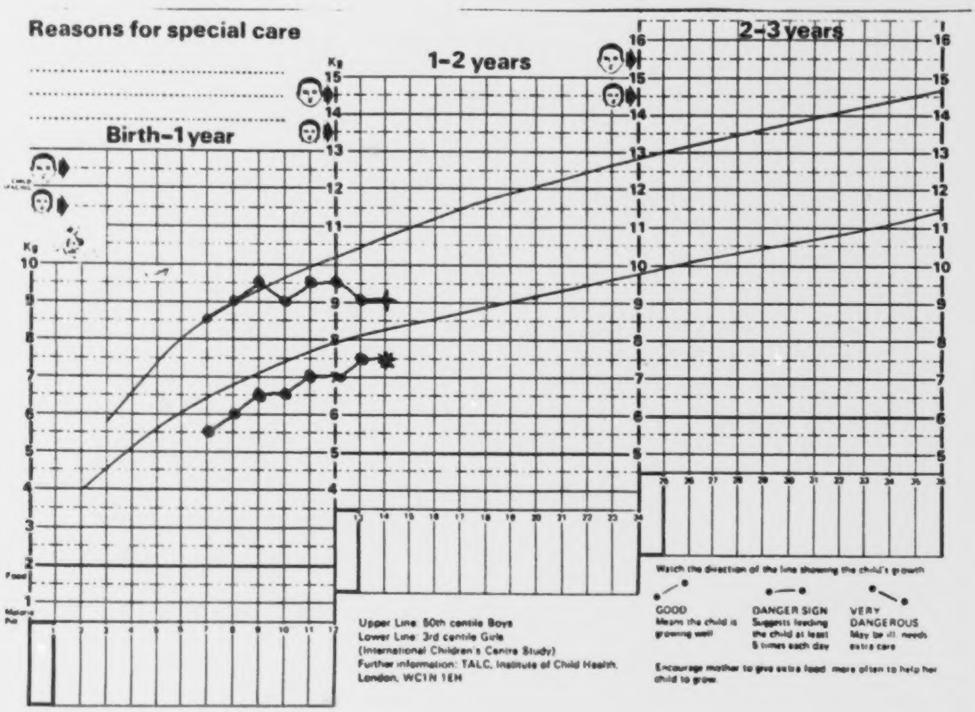
   Ask trainees to practice recording weights on the Road to Health Chart by completing Exercise 2 in the workbook. When they finish, help them correct their charts by drawing the growth curves as they should appear on the wall-sized chart. Watch for and correct the following **common errors:**

   - The calendar is not filled in completely or it is filled in incorrectly
   - The first month written on the calendar is **not** the month of birth. The most common mistake is to write January (or the first month of the local year) or the month the child is first **weighed** instead of the birth month in the first box of the calendar
   - The dot for weight is on the wrong weight or in the column for the wrong month

Practice plotting different weights and ages until most trainees can successfully record weights and ages on the chart.

d. **Interpreting the Growth Curve:** Record one weight on the wall- sized chart under the lower reference line. Record another weight for a child of the same age between the lines. Explain why we cannot say that one is healthy and the other "high risk" without more information.

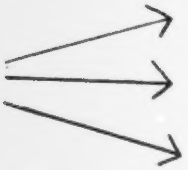
Draw growth curves for the six months prior to the weights given for each child as in the following example.



* This example shows that unless a child's weight falls far below the bottom line we cannot be sure he is malnourished. Some children will be smaller than others for genetic reasons or because of past malnutrition. The important thing is that a child is gaining weight every month.

\+ Likewise, it is not always safe to assume that a child is well nourished if his weight is between the two reference lines. He could be at "high risk" because of recent weight loss.

Draw the arrows below on the flipchart and explain the significance of the directions of different growth curves.



- weight gain - good
- no weight gain - danger sign
- weight loss - very dangerous

Use the example on page 13 of the workbook to further explain the directions of the curve.

e. **Looking for the Causes of Growth Failure:** When growth failure occurs, the first thing to do is to find out what is causing it. Explain that illness, a change in feeding habits, separation of mother and child, etc., will cause sudden weight loss.

Trainees should complete Workbook Exercise 3, Interpreting the Growth Curve. This can be done in small work groups or individually. When they finish, discuss each of the five growth curves mentioning the common causes of growth failure for each age group.

4. Write on the flipchart:

"Interpreting the growth curve and taking action to correct growth failure are the most important steps when using the Road to Health Chart."

5. Summarize this session by reviewing with trainees:

- **Purpose of the Road to Health Chart** - early identification of malnourished children
- **Resources Required** - Road to Health Charts, weighing scale set, trained literate workers, space, time
- **Frequency of Weighing** - monthly or every other month
- **Location** - community, clinic, homes

ROAD TO HEALTH WORKBOOK

A. The Growth Chart

B. Accurate Weighing is Important

C. How to Find the Age of a Child if the Mother Does Not Know

D. Recording Weights on the Growth Chart

E. How to Interpret the Growth Line

Adapted and excerpted from World Health Organization. Guidelines for Training Community Health Workers in Nutrition. Geneva, 1981.

(Trainers should select growth charts available in their regions. These growth charts should be substituted for the growth charts used in figures and exercises in this workbook. If charts with more than two reference lines are used, the description and instructions for recording and interpreting weight will also require modification.)

A. The Growth Chart

A Growth Chart is basically a graph on which a child's weight is shown at different ages. There are many types of growth charts, but most of them have the same basic features. Fig. 5 shows a typical growth chart. It should be printed on card or paper sufficiently strong to be used for some years. The horizontal lines in this chart represent weight in kilograms. The vertical lines represent age in months. The weights are marked against each horizontal line on the left-hand side of the chart. The vertical lines form 12 columns for each year, corresponding to the months of the year. The month names can be written in the 12 boxes below the columns. The first box on the left-hand side of the chart is for the month of birth. This box has thick lines around it. The first column for each year also has a box with thick lines around it. This is to identify the beginning of each year of age. The year of birth is marked by the side of the box for the month of birth (i.e., the first box with thick lines around it).

Across the graph are printed two growth reference lines. These lines give the general direction of growth in healthy children. They are not the target for the growth of all children. If a child's weight is much below these growth reference lines there is some reason for concern, but it is the direction or angle of a child's own growth line that is much more significant than any weight recorded below the lower reference line.

Some other important features of the growth chart are given below:

- Information about the child and family. This is written on the back of the graph. The family address and name, the number of children, and their state of health are all recorded (Fig. 6).
- Immunizations. There is a space for recording the different dates of immunizations. This also serves as a reminder of when the next immunizations are due.
- Medical history. It is convenient to write the illness suffered by the child on the side of the chart that shows the weight graph. The name of the disease can be written vertically in the month in which it occurs. This makes it easy to see how a disease such as measles seriously affects growth.
- Additional information. The same chart can also

be used for recording additional information. For example, if a nutritional supplement programme is being carried out and vitamin A is given every 6 months, a large A can be written at the bottom of the column of the month in which it was given. If food supplements or antimalarial drugs are given monthly a tick can be marked in the column for the appropriate month. Parents are advised to space their children as this permits each child to have a maximum of care and nourishment; if they have been advised, or have accepted some form of contraception, it is good to record this on the chart as well.

- Reasons for special care. Certain social, economic and health factors are associated with a high risk of malnutrition. The chart has a space to record these factors; it is headed "Reasons for special care." This makes it easy to identify quickly the priority children.

If parents are made to understand the significance of the information on the chart, and then allowed to keep the chart themselves, they will feel more involved and responsible for the child's health care. This encourages community participation. It saves the time and space needed for storing charts in a health centre. Also the charts can be taken with a child during visits outside the community (e.g. to the grandparents' home), or to any health centre. The charts should be put in plastic (polyethylene) covers to help parents keep them clean and dry. Another advantage of keeping cards with the parents is that the community health worker does not have to carry them when making home visits. In the case of children who are at a special risk, however, the community health worker should keep duplicate growth charts at the health centre.

FIG. 5 A GROWTH CHART

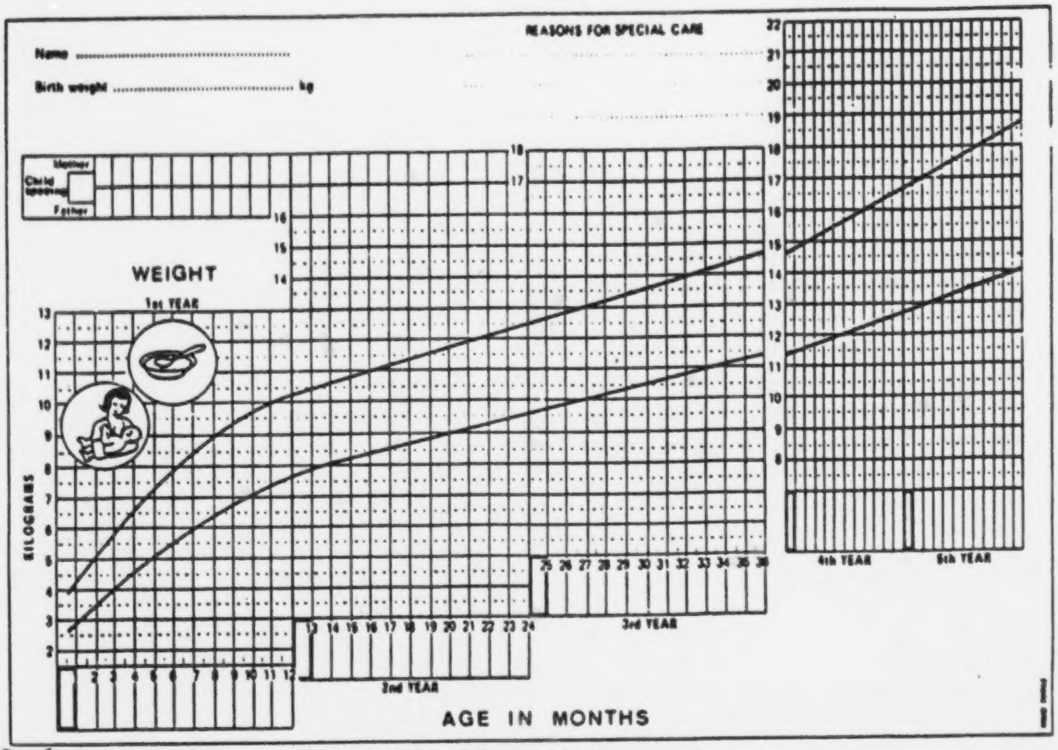
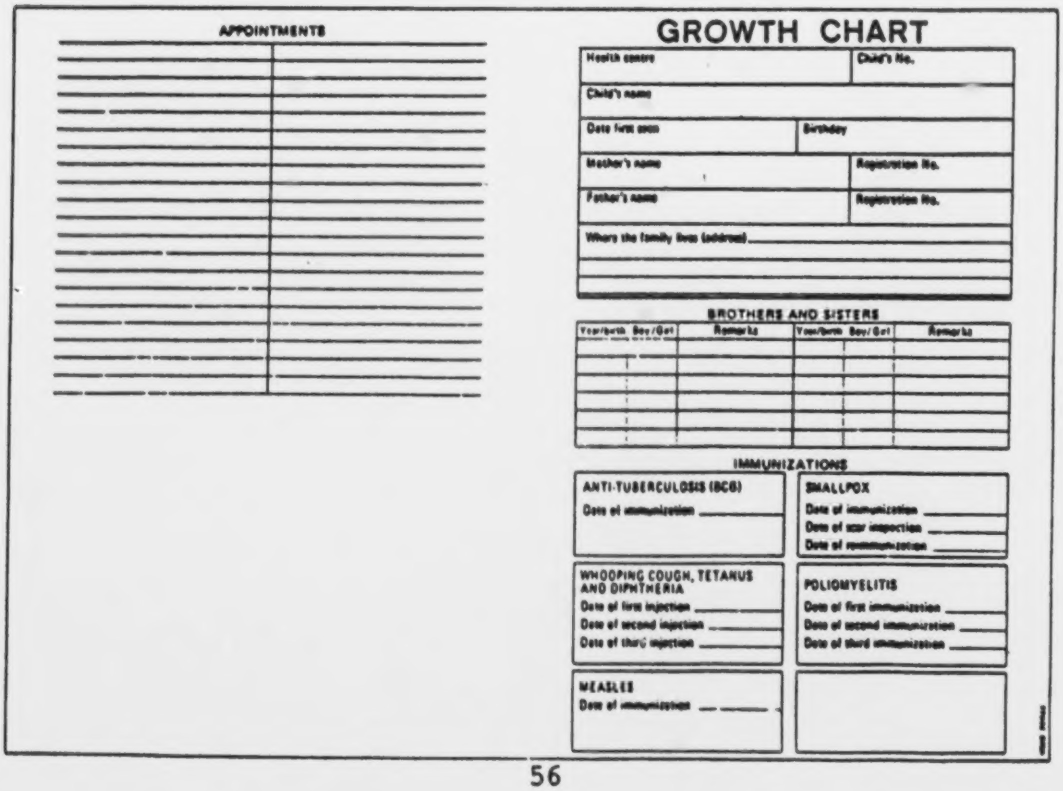


FIG. 6 THE BACK OF A GROWTH CHART FOR THE COLLECTION OF INFORMATION ON THE CHILD AND THE FAMILY



APPOINTMENTS

GROWTH CHART

Health centre	Child's No.
Child's name	
Date first seen	Birthday
Mother's name	Registration No.
Father's name	Registration No.

Where the family lives (address)

BROTHERS AND SISTERS

Year/birth	Boy/Girl	Remarks	Year/birth	Boy/Girl	Remarks

IMMUNIZATIONS

ANTI-TUBERCULOSIS (BCG)
Date of immunization

SMALLPOX
Date of immunization
Date of scar inspection
Date of reimmunization

WHOOPING COUGH, TETANUS AND DIPHTHERIA
Date of first injection
Date of second injection
Date of third injection

POLIOMYELITIS
Date of first immunization
Date of second immunization
Date of third immunization

MEASLES
Date of immunization

B.

ACCURATE WEIGHING IS IMPORTANT
Follow these steps

Accurate weighing is important. A community health worker can learn how to weigh a child quite easily by following the instructions given below.

1. Hang the scale up securely, keeping the dial at eye-level so that the weight can be read easily.
2. Adjust the pointer to zero before placing the child in the sling or basket. Most scales have a knob or screw to make this adjustment.
3. Undress the child with the help of the mother. It is better to weigh the child naked if it is not too cold and if local customs permit.
4. Place the child in the sling or basket with the help of the mother. Ask the mother to stand nearby and talk to the child. The mother should not hold the child and the child's feet should not touch the ground when the weight is being read.
5. Read the weight on the scale. If the child is struggling, try to calm him with the help of the mother and when he stops moving read the weight quickly.
6. Record the weight in figures, for instance 3.5 kg.

The most common spring scale (often called a Salter scale, although many other brand names exist) has a face which looks like a clock. The weights are marked in kilograms around the dial. Some dials also show 100-gram divisions between kilograms, but the simplest scales only have kilograms marked by bold lines and 500 grams marked by thin lines. Such scales are convenient for workers with limited education because these lines are similar to those which are drawn on the most widely used growth charts (Fig. 4).

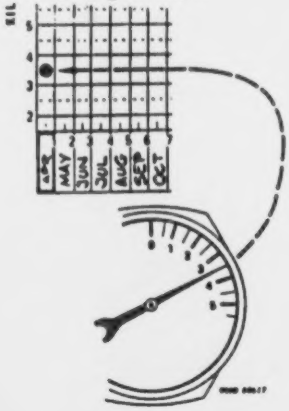
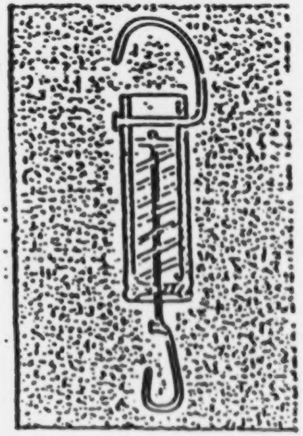
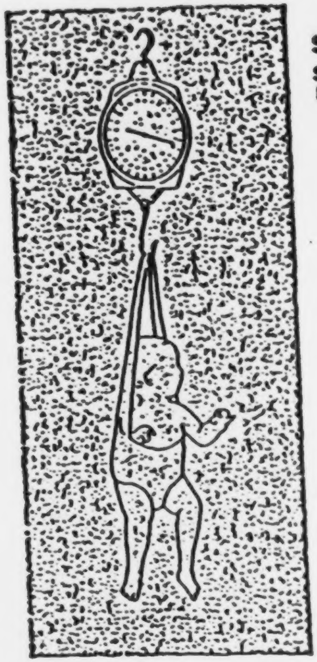


Fig. 4 THE MARKINGS ON THE FACE OF THE SPRING SCALE CORRESPOND TO THOSE ON THE GROWTH-CHART. THIS HELPS THE HEALTH WORKERS IN COMPLETING THE CHART, PARTICULARLY IF THEY ARE NOT USED TO THE DECIMAL SYSTEM.

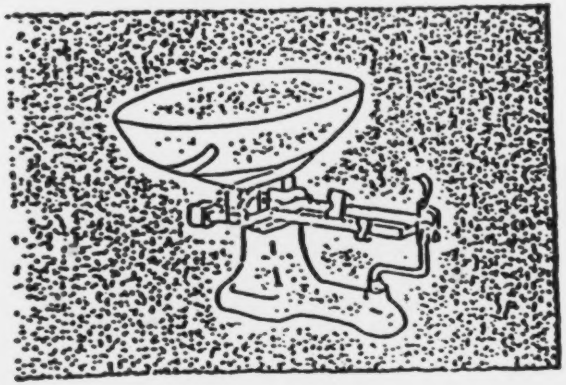


Spring Scale

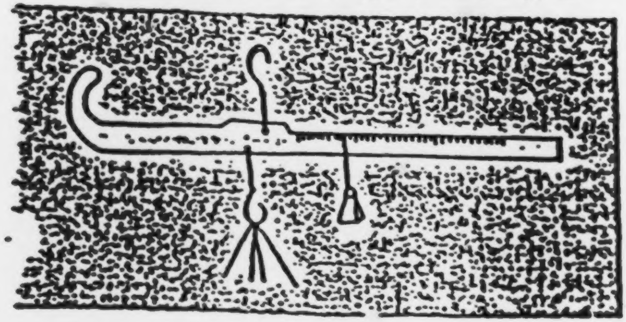
Source: Appropriate Health
Resources and Technologies
Action Group
(AHRTAG), London, U.K.



Dial-Shaped
Spring Scale
Source: Teaching Aids at
Low Cost



A Single Beam Scale for Clinic Use
Source: CMS Weighing Equipment, Ltd., London, U.K.



Philippine Bar Scale
Source: Nutrition Center of the Philippines, Manila, Philippines

C. How to find out the age of a child if the mother does not know

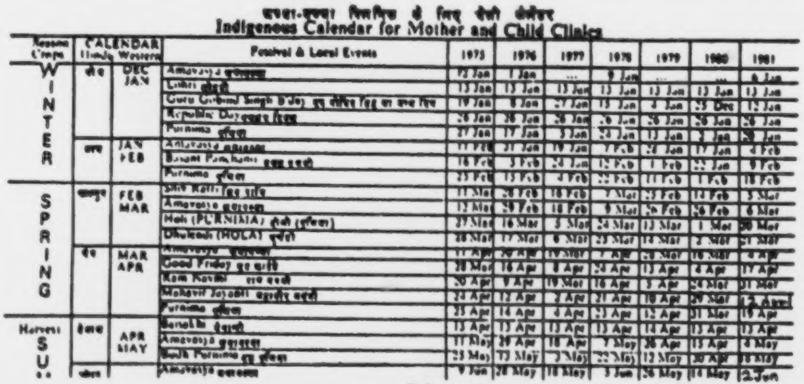
There are two important factors in measuring growth - weight and age. It is very important, therefore, to know the correct age of a child. Often mothers do not remember the dates of births of their children. In such cases the community health worker can estimate the age of a child by asking the mother certain questions and by using a local-events calender.

The first simplest way to find out the age of a child is to look up the local official register of births, baptismal certificate book, or similar record. Often mothers forget or are not aware of the existence of such records.

If the child is not registered or if no such records exist, the community health worker should first try to find out the year of birth of the child. This can be done by asking the mother if the child was born a few months before or after another child in the neighborhood. The community health worker should then find out if the date of birth of that child is known. If the mother of the second child knows the date of birth of her child, the year of birth of the first child can be easily estimated. The year of birth can be easily determined in this way for children up to 4 years of age. In the case of older children the year of birth becomes difficult to estimate correctly; however, with older children, it is not so important to be absolutely accurate.

The next step is to determine the month of birth. This can be done by the use of a local-events calender. A local-events calendar shows all the dates on which important events took place during a past 3-5 year period. It may show the different seasons, months, phases of the moon, local festivals and events in the agricultural cycle. (Fig. 1). National and local occurrences of importance are also marked on it; these include storms and cyclones, political elections, the opening of nearby roads, cinemas, shops, etc. Each community health worker should make his own local-events calender.

FIG. 1 AN EXAMPLE OF A LOCAL-EVENTS CALENDAR USED IN INDIA



Indigenous Calendar for Mother and Child Clinics

EXERCISE 1: A Local Events Calendar

Develop a calendar of key events in your area during the past four years, to help parents recall the approximate birth months of their children.

Season	Month	Festivals and Local Events	1981	1982	1983	1984

D. Recording weights on the growth chart

The weight of a child should be recorded on the chart according to the instructions given below.

1. Write the name, address and information about the child and the family on the back of the chart. It is important to do this at once to show whose record it is and to avoid recording one child's weight on another child's chart.

2. Write the month of birth in the box below the first vertical column (the first box which has thick lines around it). Near the box write the year of birth. This is September 1978 in the example in Fig. 7.

3. Note that there are 5 sets of 12 columns. Each set is for one year of the child's life. Beginning with the month of birth (see instruction 2), write out the following months of the year in the following boxes. When you reach January, write the year near that box exactly as you wrote the year of birth (see instruction 2) near the box for the month of birth.

4. Record the weight by putting a big dot on the line corresponding to that weight in kilograms. For example, if the weight of a child is 6 kg in a given month, find the horizontal line representing 6 kg and put a dot at the point on that line where it meets the column for the month in which the weight is being taken. This is January 1979 in the example shown in Fig. 7.

5. The position of the dot within a column can be adjusted. The purpose of this is to indicate when (early in the month, in the middle of the month, or late in the month) the child is being weighed. If the child is being weighed early in the month, put the dot towards the left side of the column. Put the dot in the middle of the column if the weight is being taken in the middle of the month. If the weight was taken late in the month, put the dot towards the right side of the column.

The above instructions should be followed each time you record the weight on a chart. An example of weight chart showing 3 weights of a child taken on 3 different occasions is shown in Fig. 8. Notice that the three weight dots are joined by a line. **This is the line of growth.** It is very important.

Notice too, that the chart in Fig. 8 is for a different child from the one in Fig. 7. The child in Fig. 8 was first seen and weighed in September 1977 by a community health worker, who questioned the mother about when the child was born. The month of birth (June 1977) was written in the first box on the chart and the weight record was placed in the fourth column (September).

INCREASE IN WEIGHT WITH AGE IS MORE IMPORTANT THAN WEIGHT ON ANY ONE OCCAISION

FIG. 7 RECORDING THE WEIGHT ON A GROWTH CHART

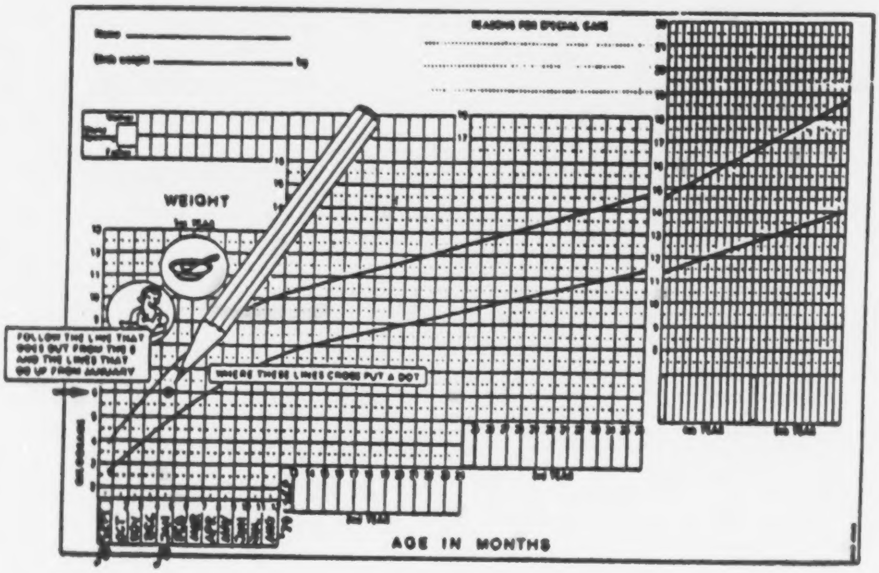
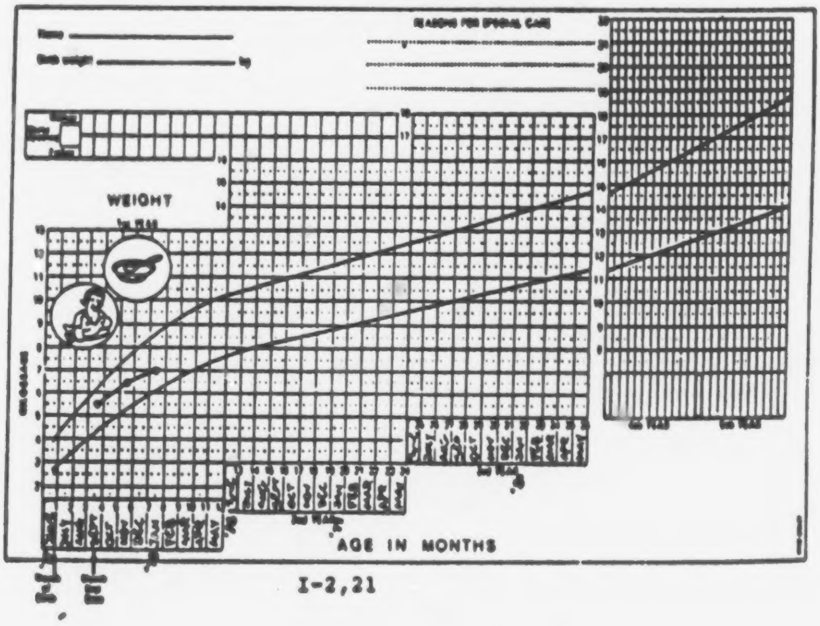
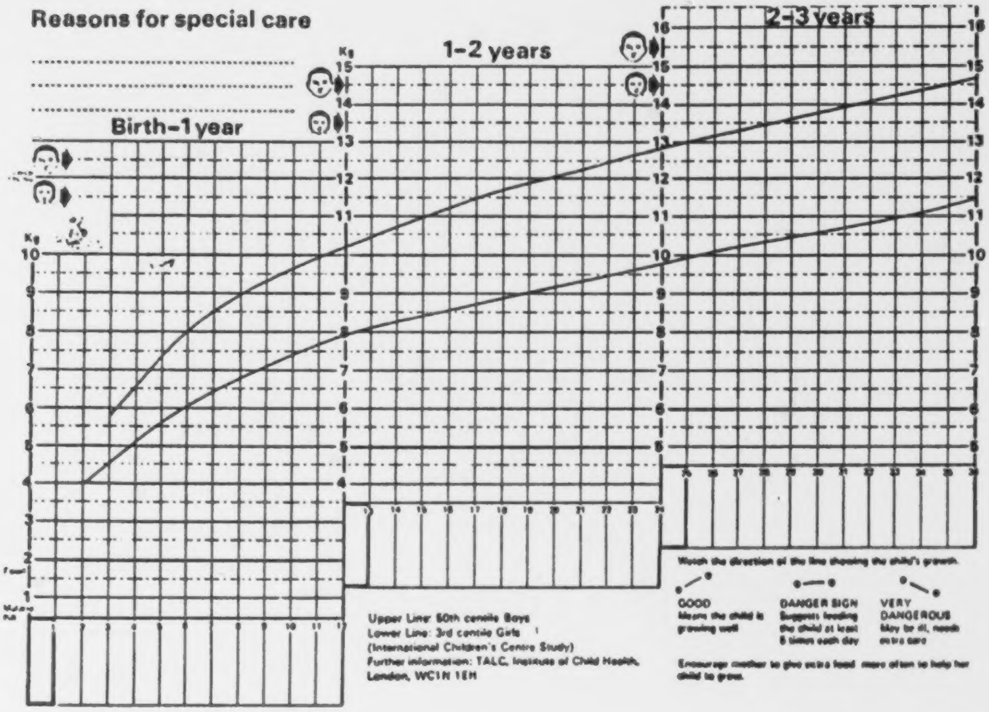


FIG. 8 AN EXAMPLE OF A GROWTH LINE PLOTTED ON THREE WEIGHT MEASUREMENTS



Exercise 2: Recording Weights



Complete the growth chart for this child:

1) John was born in March 1982. His mother brought him to the clinic in May 1982 when he was weighed for the first time. His weights during 1982 and 1983 were:

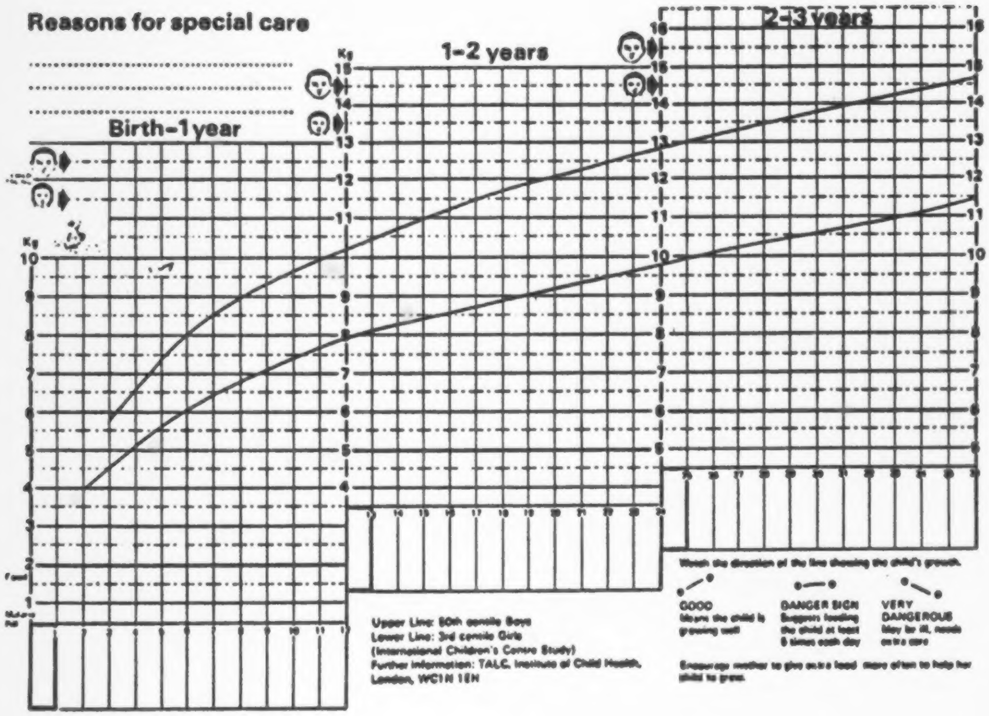
1982:

May: - 5 kg
June: - 5.5 kg
July: - 6 kg
Aug: - not weighed
Sep: - 6.5 kg
Oct: - not weighed
Nov: - 7 kg
Dec: - 7.5 kg

1983:

Jan: - 7.5 kg
Feb: - 7 kg
March: - 7.5 kg
April: - 8 kg
May: - not weighed
June: - 8.5 kg
July: - 8.5 kg
Aug: - 9 kg
Sep: - not weighed
Oct: - not weighed
Nov: - 10 kg
Dec: - 10 kg

Exercise 2: Recording Weights



MORE PRACTICE!

Guillermo Gomez was born 20 December 1982. He was first weighed at a community weighing day in June 1983. His weights during the next 12 months were:

June: - 7 kg
July: - 7.5 kg
Aug: - 7.5 kg
Sep: - 8 kg
Oct: - 8 kg
Nov: - 8.5 kg
Dec: - not weighed
Jan: - 9 kg
Feb: - 8.5 kg
March: - 8 kg
April: - 8.5 kg
May: - 9 kg

E. How to interpret the growth line

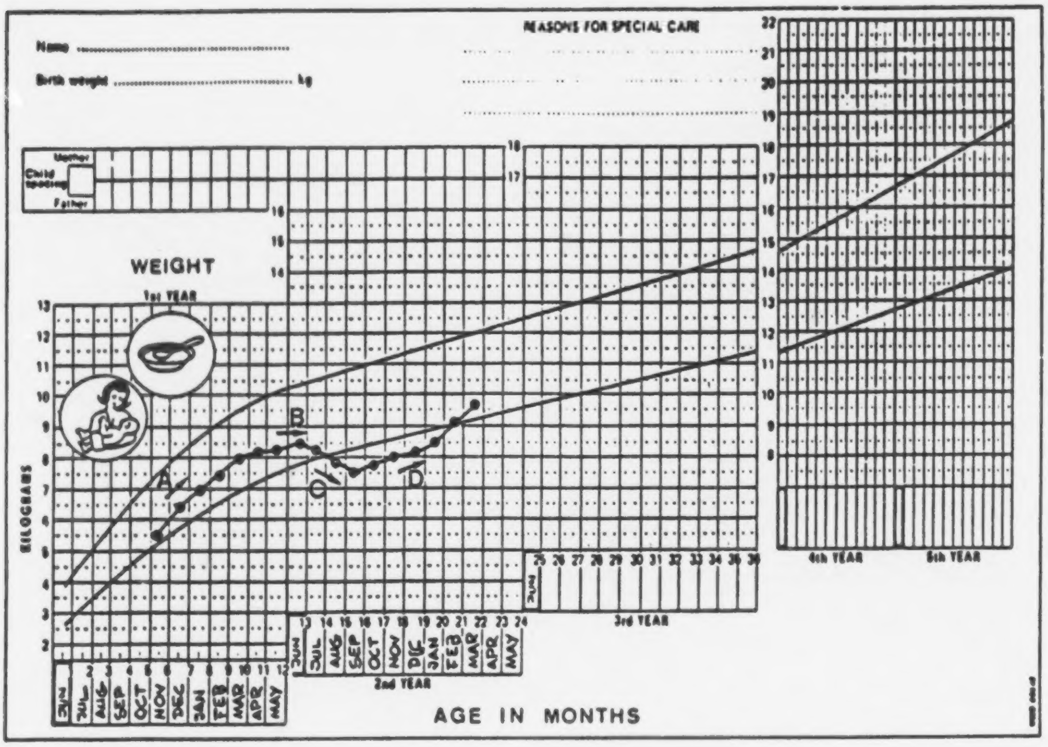
Look carefully at the growth line in Fig. 8. Note that the line is going upwards left to right, from 5.5 kg in September to 6.5 kg in November and then to 7 kg in January 1978. Remember that when the line is going up, the child is growing; this is good. If the line is horizontal or going down the child is not growing well, and this is not good. Some charts have examples of the direction of growth curve printed below the chart. This is to remind health workers that the direction of growth, upwards, horizontally or downward, is very important.

> In the first 6 months of life a levelling off or a downward movement of the growth line is a serious matter. After 2 years a small variation over one or two months is not so serious.

The importance of the direction of the growth curve is illustrated in Fig. 9. Arrows A, B, C, and D have been drawn on the growth chart parallel to the growth curve for different periods. The growth curve parallel to Arrow A is good. The growth curve parallel to Arrow B is not satisfactory and action should have been taken. When the growth curve fell, parallel to Arrow C, the child was in a dangerous condition and urgent action was needed. Any child who does not gain weight for three months should be referred to the supervisor or health centre. When the growth curve returned to the direction of Arrow D, the child's growth became normal again.

Remember that it is the direction of the growth curve that is more important than the position of the dots on the curve. The dots parallel to Arrow B are above the lower reference line, but the growth curve is levelling off and this is a matter for concern. The dots parallel to Arrow D are below the reference line, but the direction of the growth line is once again upwards and therefore the mother is congratulated for her good care.

FIG. 9 THE DIRECTION OF THE GROWTH CURVE IS MOST IMPORTANT

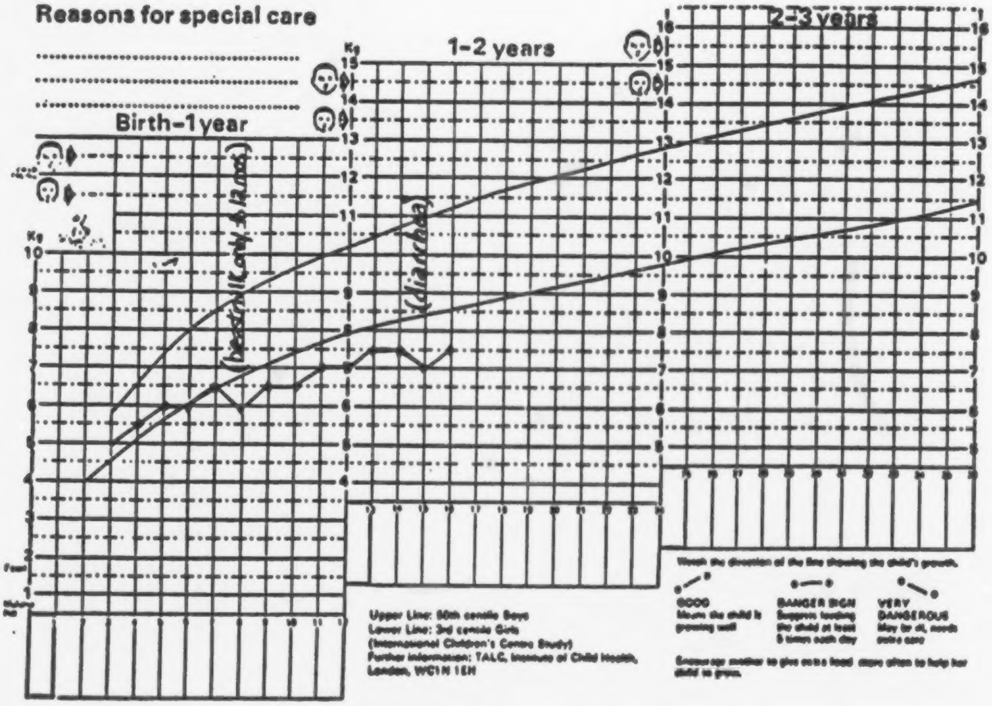


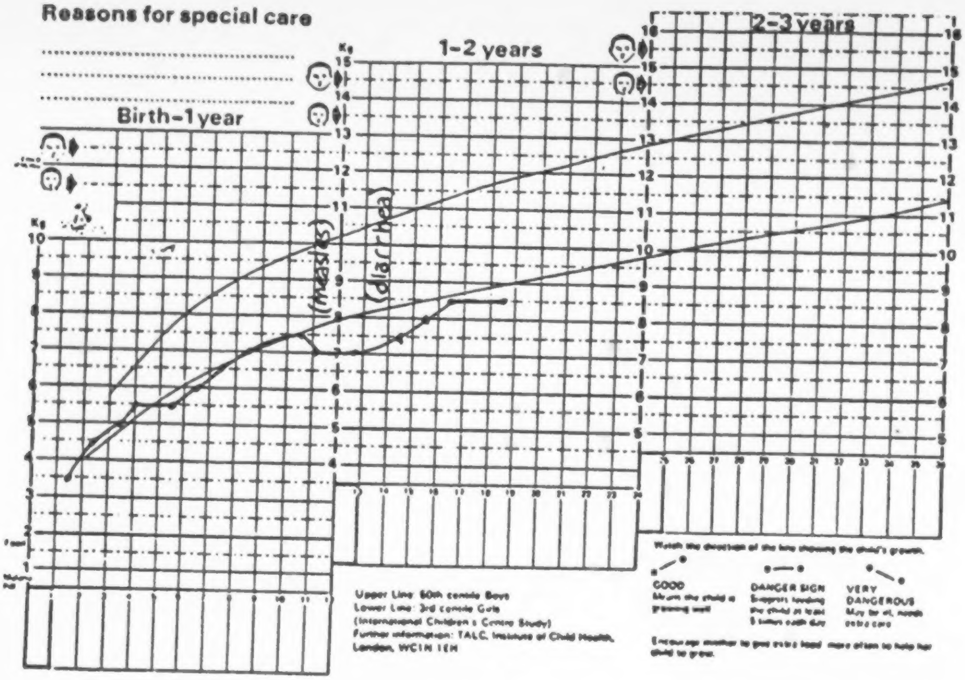
The direction of the growth curve is more important than the position of the dots.

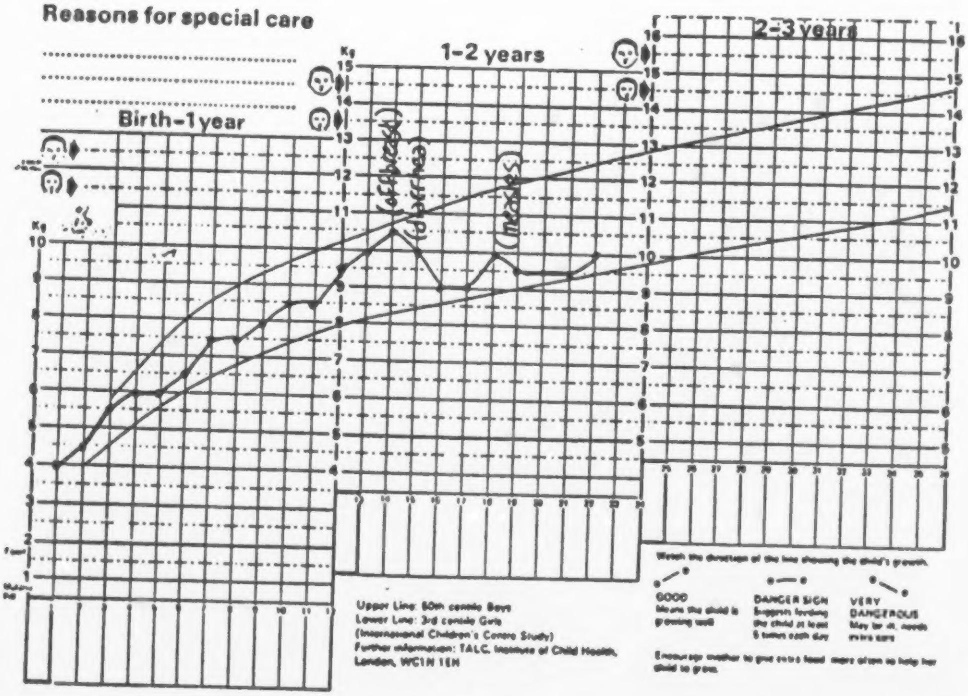
Exercise 3: Interpreting the Growth Curve

When a child begins to lose weight or does not gain weight for several months, it is a sign of problems. Analyze the growth of the children in the next five charts:

1. Describe the growth of each child.
2. What questions would you ask to find out the possible causes of growth failure in each case?
3. What advice would you give each mother at the most recent weighing session?




Reasons for special care
Birth–1 year
1–2 years
2–3 years
Kg
(measles)
(diarrhea)
Upper Line: 50th centile Boys
Lower Line: 3rd centile Girls
(International Children's Centre Study)
Further information: TALC, Institute of Child Health, London, WC1N 1EH
Watch the direction of the line showing the child's growth.
GOOD Means the child is growing well
DANGER SIGN Suggests feeding the child at least 5 times each day
VERY DANGEROUS May be ill, needs extra care
Encourage mother to give extra food more often to help her child to grow.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Encourage mother to give extra food more often to help her child to grow.

SESSION 4: THE THINNESS CHART

The Thinness Chart was developed for use in maternal child health clinics in Nepal by Save the Children (U.K). The Thinness Chart uses two measures, weight and height, to assess the nutrition status of young children. A large multi-colored wall chart is first attached to the wall. Children are weighed and then placed standing in front of their weights on the chart. Height is then measured by placing a flat hand on the head and marking the point where the hand touches the chart. Nutrition status can be measured either in terms of percentages of standard weight for height or by using color-coded cutoff points indicating high, potential and low risk. Age is not required for this method. Graphing of weight is accomplished simultaneously with the measurement of height on the chart.

Purpose:

In this session, trainees practice using the Thinness Chart to classify the nutrition status of young children. The advantages of the Thinness Chart for community action projects are discussed.

Time: 1 hour without practice

Materials:

- The Thinness Chart, available from TALC - Teaching Aids at Low Cost
- One copy of the booklet, "The Thinness Chart - How You Use It" for each trainee
- Chalkboard and chalk
- Several willing young children

Steps:

1. Introduce the session by telling trainees that one way to identify children who are presently malnourished or at high risk of malnutrition is by comparing their current weight to their current height. By comparing a child's weight and height to standards for well-nourished and malnourished children, we can identify those children who are growing well as well as those who are malnourished and in need of additional counseling and medical attention.

2. Display the Thinness Chart. Explain that weights are shown on the vertical lines of the chart and heights on the horizontal lines. The colored bands across the chart tell the health or nutrition workers whether a child is healthy (green), in danger of malnutrition (yellow),

malnourished (lower red) or severely malnourished (upper red). In contrast to the Road to Health Chart, the higher a child falls on the chart's curve, the more malnourished he or she is.

3. Distribute copies of the booklet "The Thinness Chart, How You Use It." Demonstrate steps for using the chart as presented in the booklet.

4. Practice: Arrange a practice session in which trainees weigh and assess several children using the Thinness Chart. Observe trainees and correct problems to improve their skills where necessary.

5. Ask trainees to brainstorm the advantages and disadvantages of the Thinness Chart as a tool for nutrition assessment at the community level. These might include:

Advantages:	Does not require calculation of age.Can be used by people with minimal literacy skills. Mothers can participate. Colored bands make assessment easy and understandable.
Disadvantages:	Requires special chart and weighing equipment. Wall and adjoining floor must be flat. Difficult to make children stand still in front of chart. For children under one year, a measuring board is also required.

6. Summarize by reviewing the purpose and steps in using the Thinness Chart for nutrition assessment.

   Note: The Thinness Chart is being used in two of the countries where CEDPA's training workshops have been held, Nepal and Senegal. The chart is generally easier to use and interpret than the WHO Road to Health Chart because it does not require graphing numerical measurements and assessing their position on the graph. Instead, the wall chart combines the measurement of height with the assessment of normal or abnormal growth. The Ministry of Health of Senegal is currently attempting to adapt the chart for use by non-literate village workers, who would use color coded weighing scales and wall charts to assess nutritional status of young children.

THE THINNESS CHART

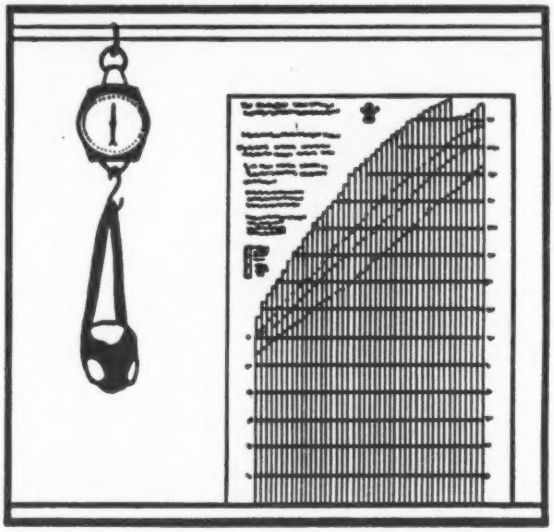
How you use it

Developed by the Save the Children Fund with the London School of Hygiene and Tropical Medicine. The Thinness Chart is available from: TALC, P.O. Box 49, St Albans, Herts, AL1 4AX, UNITED KINGDOM.

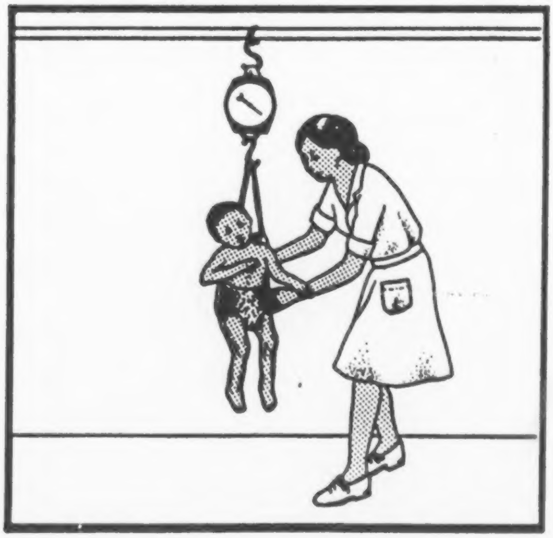
Put the chart near your scales.

The chart goes on the wall. The wall must be even.

The bottom of the chart must touch the ground.

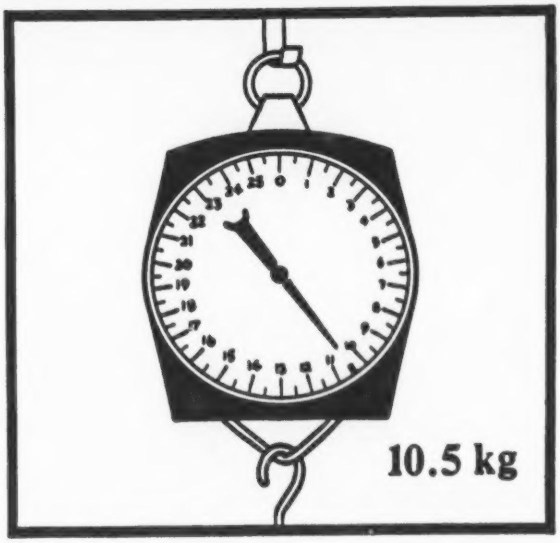


Weigh the child.

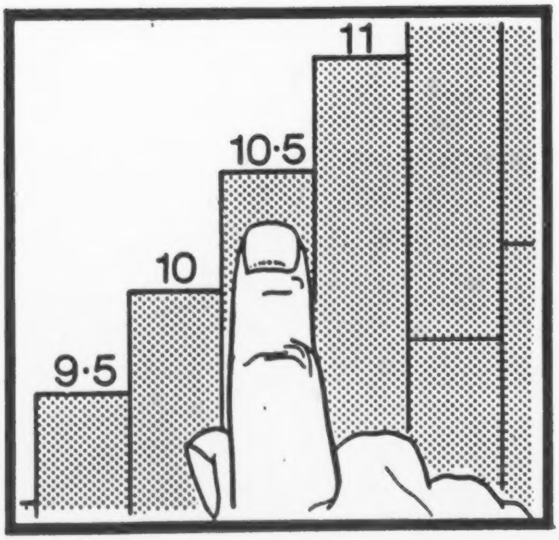


1

Note the weight to the nearest half kilo (kg).



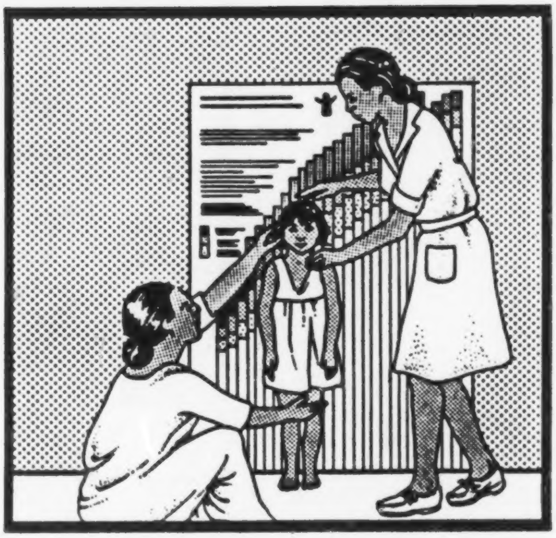
Find the weight on the chart with your finger.



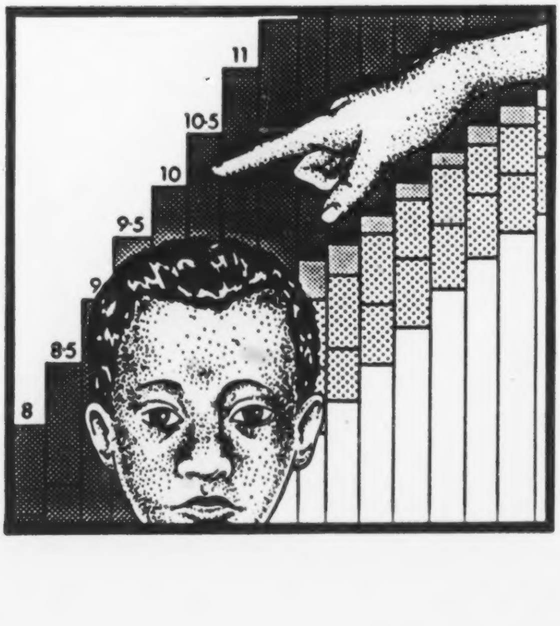
2

Ask the mother to put her child under your finger.

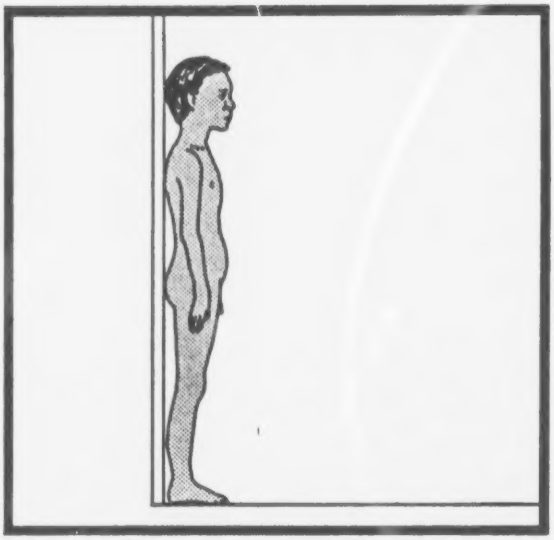
The child must be in the correct place.



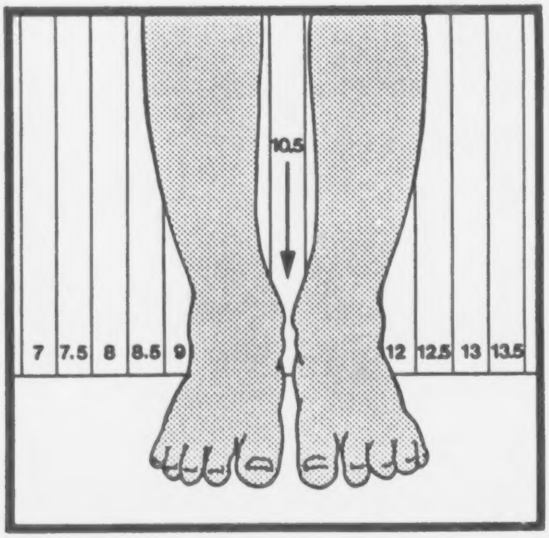
CHECK THAT:
1 the middle of the child's head is under his weight on the chart.



CHECK THAT:
2 the child's shoulders and feet are against the chart.



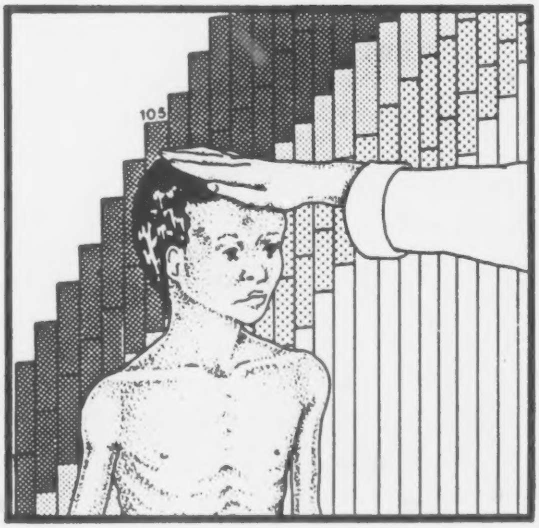
CHECK THAT:
3 the child's heels are against his weight at the bottom of the chart.


10.5
7
7.5
8
8.5
9
12
12.5
13
13.5

THEN:
Put the palm of your hand on the child's head.

Touch the chart with your finger.

Which colour does your finger touch?

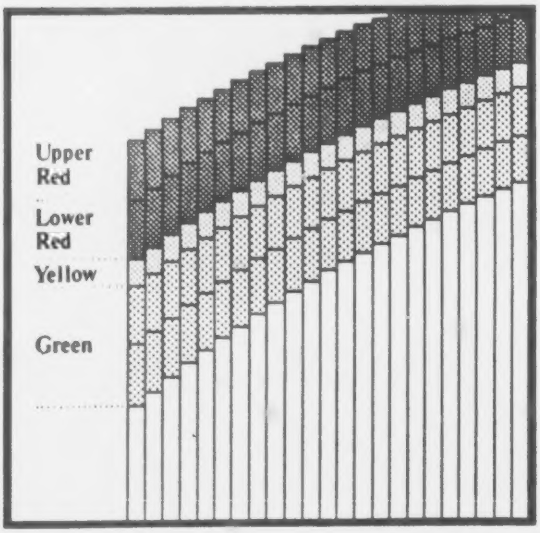


Is the child in the:
UPPER RED?

LOWER RED?

YELLOW?

GREEN?

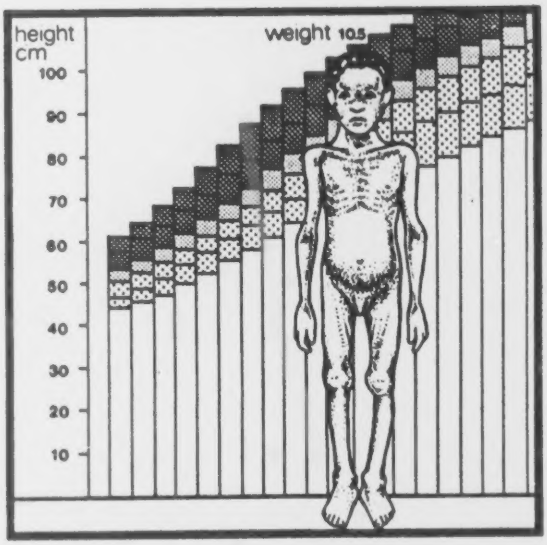

Upper Red
Lower Red
Yellow
Green

You can darken the upper red section yourself. This will show you if the child is extremely thin.

This child is in the UPPER RED.

He is extremely thin (wasted).

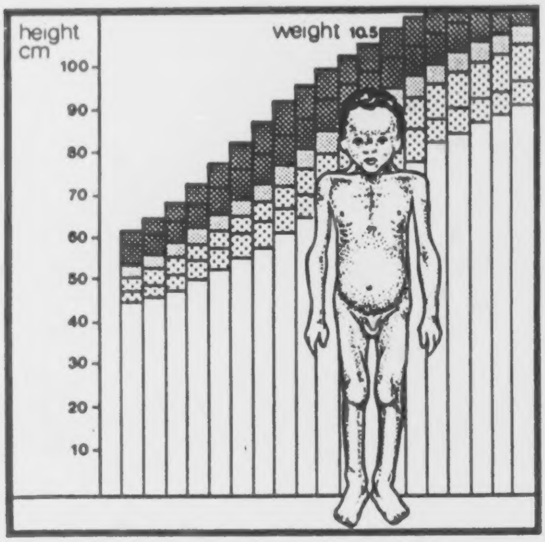
You must help him urgently.


height
cm
weight 10.5
100
90
80
70
60
50
40
30
20
10

This child is in the LOWER RED.

He is very thin (wasted).

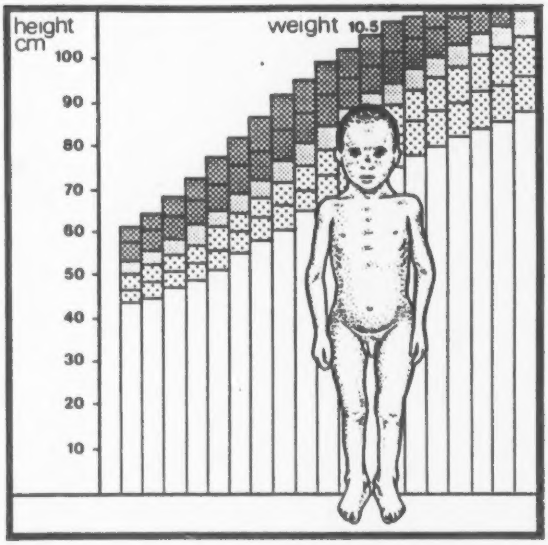
You should help him quickly.


height
cm
weight 10.5
100
90
80
70
60
50
40
30
20
10

This child is in the YELLOW.

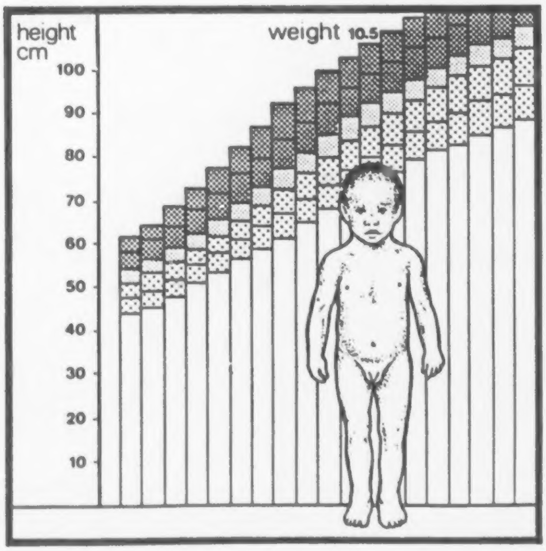
He is thin.

You must watch him regularly.


height
cm
100
90
80
70
60
50
40
30
20
10
weight 10.5

This child is in the GREEN.

He is well nourished.


height
cm
100
90
80
70
60
50
40
30
20
10
weight 10.5

7

SESSION 5: CHOOSING A GROWTH MONITORING SYSTEM

Purpose:

To compare the advantages and disadvantages of three growth monitoring tools: the three-color arm circumference tape, the Road to Health Chart and the Thinness Chart.

For use in training managers who will choose their own systems for measuring and monitoring the growth of young children.

Time: 20 minutes

Materials:

- Handout - "Choosing a Growth Monitoring System"
- Wall-sized version of the handout

Steps:

1. Distribute the Handout - "Choosing a Growth Monitoring System." Ask participants to use information from Sessions 2-4 to answer the questions on the chart.

   Note: A copy of the completed handout is provided with this session for the trainer's reference.

2. Complete the wall-sized handout as a group activity. Use this as a time to review important points about each growth monitoring system.

3. Remind participants that the following criteria determine which growth monitoring system is appropriate in a given situation:

   - Characteristics of malnutrition in the area
   - Number of workers and their skills
   - Resources available for training and supervision
   - Resources available for assistance to "high risk" children

HANDOUT

CHOOSING A GROWTH MONITORING SYSTEM

SYSTEM	MEASUREMENTS REQUIRED	WHAT IT MEASURES	TOOLS/EQUIPMENT REQUIRED	TRAINING REQUIRED	DISADVANTAGES	ADVANTAGES
Mid-upper Arm Circumference Tape	- Distance Around Mid-upper Left Arm	- Severe Malnutrition in Children 1-5 Yrs.	- Tape Marked Either with Three Colors or in CM Divisions	- Minimal Training Required to Teach Health Workers, Mothers and Other Community Members How to Use	- Only Useful with Children - Measures Mal-Nutrition that is Already Severe	-Quick, Easy to Use -Portable, Can Be Used Anywhere -Easy to Understand -Detects Improvements in Nutrition Status
Road to Health Chart	- Monthly Weights - Age at First Weighing	- Past and Present Malnutrition - Most Sensitive with Children Under 2 Yrs.	- Weighing Scale - Road to Health Chart	- Extensive Training And Supervision Required	- Age is Often Difficult to Determine - Workers Must Be Literate - Equipment Expensive	-Sensitive to Early Changes in Nutrition Status -Weighing Activity is Popular in the Village
Thinness Chart	- Weight - Height	- Present Malnutrition - Wasting	- Thinness Chart - Weighing Scale - Measuring Board	- Training and Supervision Required	- Requires Flat Wall and Floor - Difficult to Make Children Stand - Chart Must Be Purchased or Produced Locally - Equipment Expensive	-Easier to Use than the Road to Health Chart -Can Be Used By Semi-literate Workers -Colors Make it Easy to Understand and Use -Weighing Activity is Popular

BEST COPY AVAILABLE

SESSION 6: COUNSELING, REFERRAL AND FOLLOW-UP OF MALNOURISHED CHILDREN

Purpose:

In this session, trainees practice explaining the significance of children's growth measurements to their parents. Actions that should be taken in cases of severe malnutrition and early growth failure are discussed.

Time: 2 hours

Materials:

- Role Plays - containing growth charts and mother's instructions for three situations (In this exercise, trainees use the Road to Health Chart as the tool for assessing the nutrition status of several children. Arm circumference measures or measures from the Thinness Chart can be substituted.)
- Handout - "Community Action with Malnourished Children" (This should be developed locally. An example is included.)

Steps:

1. Introduce the session with a discussion of the critical role parents play in monitoring and taking action to improve the growth of their children.

2. Divide into work groups of three people. Work groups will conduct three role plays each. The characters in the role plays are a "community nutrition worker," the "mother" of a malnourished child and an "observer." Work group members will rotate the roles so that each member plays all three roles.

3. Give group members different situation sheets and instruct them to remove the "Instructions to the Mother" for their own reference. In each situation, the "mother" brings her child's Road to Health Chart to the "community nutrition worker." The "worker's" job is to:

   - explain the Road to Health Chart and the child's growth curve to the "mother";
   - discover the causes of growth failure by asking the questions about the health, eating habits, etc., of the child;
   - help the "mother" plan what to do to improve the growth of her child.

The "observer" should note how the "worker" uses the Road to Health Chart to explain the child's situation and the need for action.

Allow about five minutes per role play situation.

4. Discuss the role plays by asking trainees to answer the following questions based on their experience in the roles of "mother," and "community nutrition worker" and "observer."

   - How did the "community nutrition worker" use the Road to Health Chart to explain a child's nutrition status?
   - What questions did you ask to find out why the child had stopped growing?
   - Did the "community nutrition workers" tell the "mothers" what they should do, or did they plan together how to improve the child's growth? Which do you think is more effective?

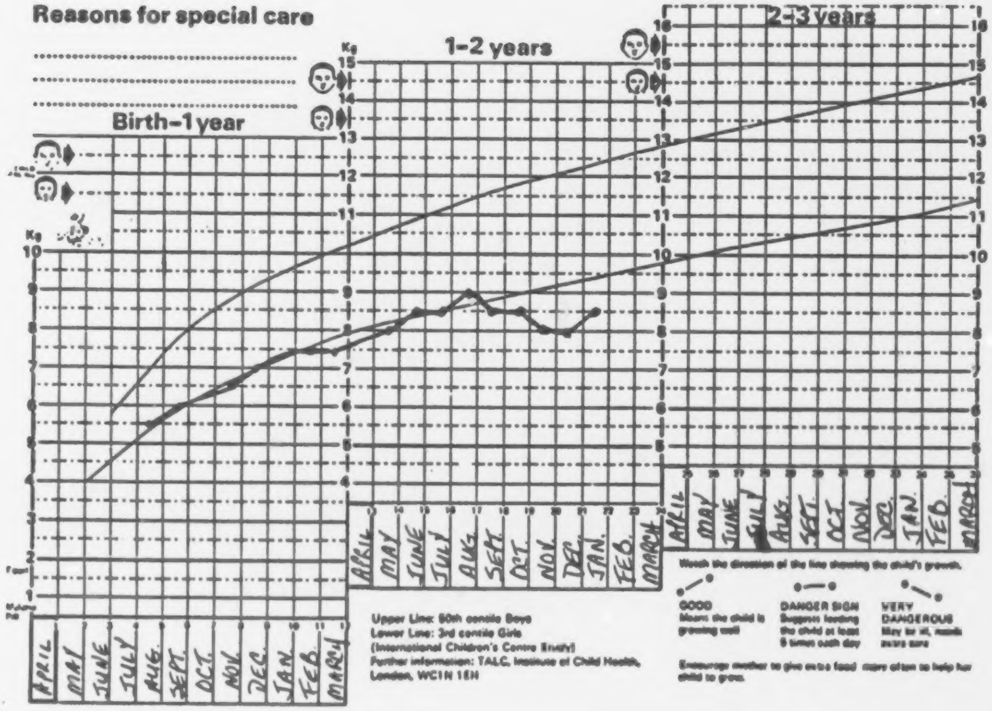
5. Counseling and education of parents are two community interventions to improve the nutrition of children identified during growth monitoring activities. Ask participants: "What other actions can/should be taken in the community with "high risk" children?" Write their responses on the flipchart.

6. Distribute the Handout - "What to Do When Children are Malnourished." Explain that each community nutrition program must decide what the community/clinic or agency will do for the malnourished children identified in growth monitoring activities. This handout gives a basic list of appropriate community interventions. Review them with the trainees and encourage them to add others that they feel would be necessary and feasible.

7. Review the basic steps in measuring growth and taking action to improve the nutrition of "high risk" children:

   - Measure and assess the growth of all children under five regularly.
   - Counsel the parents of "high risk" children. Visit them at home if possible.
   - Refer or treat malnourished and sick children for illness.
   - Follow up and evaluate the progress of each child.

ROLE PLAY
Situation #1

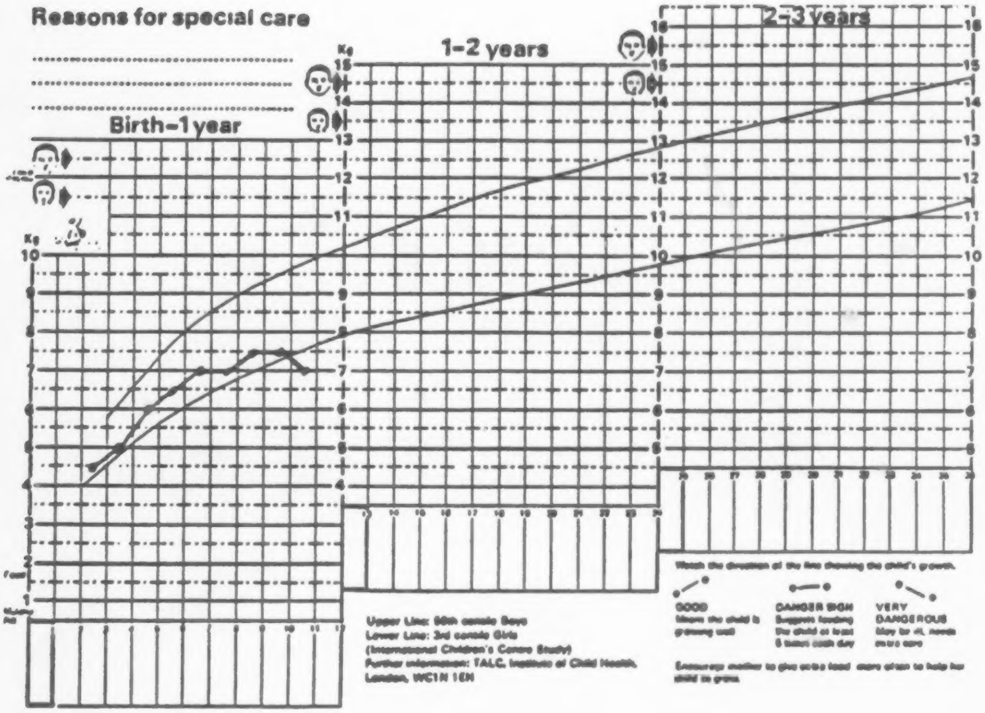


Instruction to the Mother:

You brought the baby to the weighing activity because she is sick and has gotten thin.

You stopped breastfeeding her in September, at 4 months, because she "didn't like" your milk.

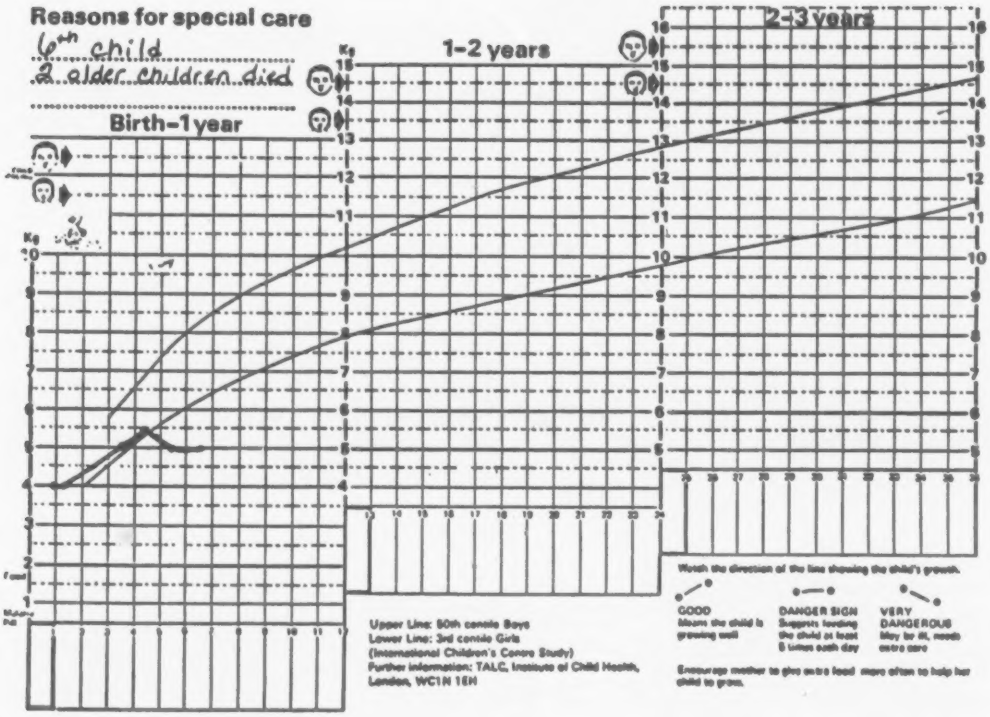
ROLE PLAY
Situation #2



Instruction to the Mother:

You work on a tea plantation all day and leave this child with your 8-year-old daughter. Your husband left in August to find a job in the city. You are breastfeeding in the morning and at night. During the day the baby eats rice from the morning meal.

ROLE PLAY
Situation #3



Instruction to the Mother:

You stopped breastfeeding this child in August when he was 16 months old because you became pregnant again. He refused to eat much for the next few weeks. Then he got the measles in November. Since then he has had frequent diarrhea.

COMMUNITY ACTION WITH MALNOURISHED CHILDREN

To the Trainer:

This handout should be developed by each program based on the nutrition assessment instruments they use, their resources and established guidelines for intervention.

Example:

In a CEDPA-supported nutrition program, Community Nutrition Volunteers use arm circumference and weight gain to identify "high risk" children.

If a child has:	The Community Nutrition Volunteer:
Yellow Arm Circumference (>12.5 cm <13.5 cm) or No weight gain for two months	- Counsels the parent(s) - Teaches the mother to make improved foods for child feeding - Refers the child to the nearest clinic if he is sick - Follows up after one month
Red Arm Circumference (<12.5 cm) or No weight gain for three months	- Counsels the parent(s) - Refers for immediate medical treatment - Gives food supplement - Visits home one week later to teach mother how to make improved foods and how to treat diarrhea with ORS - Follows up monthly until arm circumference is green
All children	- Teaches the mother to prepare improved weaning foods - Teaches the mother how to make and give ORS to treat diarrhea - Discusses the importance of and methods for child spacing

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Morley, D. and Woodland, M. See How They Grow Monitoring Child Growth for Appropriate Health Care in Developing Countries. Oxford University Press, New York, 1979.

Nabarro, D., Verney, J. and Wijga, A. The Weight-for-Height Chart Project. Evaluation Report. 1982-1984.

World Health Organization. Guidelines for Training Community

Health Workers in Nutrition. WHO Offset Publication No. 59. Geneva, 1981.

UNIT 3

PROMOTING BREASTFEEDING

SESSION 1: The Importance of Breastfeeding

SESSION 2: Helping Mothers Breastfeed

SESSION 3: Case Study: Breastfeeding Information for Kenyans

SESSION 1: THE IMPORTANCE OF BREASTFEEDING

Purpose:

In this session, trainees list the advantages of breastfeeding and the dangers of bottle-feeding and breast milk substitutes. Rules for successful breastfeeding are presented and discussed.

Time: 1 hour

Materials:

- Handout - "Breastfeeding Self-Test" plus answer sheet
- Handout - "Rules for Successful Breastfeeding"
- Flipchart and marking pens

Steps:

1. Distribute the "Breastfeeding Self-Test" and ask trainees to complete it individually. When they finish, tell them that you will discuss the test at the end of the session.

2. Ask trainees to brainstorm the advantages of breastfeeding for mothers and infants. List their responses on the flipchart. Then, ask trainees to brainstorm the dangers of bottle-feeding and early introduction of foods other than breast milk. List these on the flipchart. Add any advantages or dangers that you feel trainees have missed.

    Summarize: "Breastfeeding has many advantages for mothers and infants. Breastfed infants are generally healthier than infants fed with bottles and breast milk substitutes. This is especially true in low income families because breast milk is a clean, nutritious and low cost food for infants. Breast milk also contains anti-infective agents that help breastfed infants fight against infection. Infants who are not breastfed and those who are given foods other than breast milk during the first months of their lives are very often malnourished and at "high risk" of sickness and death."

3. Distribute the Handout - "Rules for Successful Breast-feeding." Discuss each of the rules and the reasons why each one encourages successful breastfeeding.

4. Discuss the importance of giving colostrum. In many countries, women believe that colostrum should not be given to newborn infants. This is not true! The composition of colostrum is different from the milk produced by the mother 3-5 days after birth. Colostrum contains large amounts of protein substances (including secretory immunoglobulin) which helps prevent infection in the newborn. It is a good idea to put the infant to the mother's breast immediately after delivery since frequent sucking is necessary to establish lactation.

5. Summarize this session by asking the trainees to repeat the self-test taken at the beginning of the session. After they finish, review the correct answers to each of the questions and compare scores before and after the session. Leave some time for additional questions and answers.

ANSWERS TO BREASTFEEDING SELF-TEST

1. T
2. F
3. F
4. F
5. F
6. F
7. T
8. T
9. T
10. T
11. F

BREASTFEEDING SELF-TEST

Answer the following questions TRUE or FALSE.

	T	F
1. Breast milk contains all the nutrients an infant needs until he/she is four months to six months of age.	____	____
2. Women with small breasts will have difficulty breastfeeding.	____	____
3. Colostrum has no nutritional value. It should be discarded.	____	____
4. Breastfeeding should be on a schedule.	____	____
5. After birth, it is best to wait 24 hours before putting an infant to the breast.	____	____
6. Malnourished women cannot breastfeed their infants successfully.	____	____
7. Most women can breastfeed successfully.	____	____
8. Pregnancy should be avoided while the youngest child is still breastfeeding.	____	____
9. Frequent breastfeeding will increase milk production.	____	____
10. Women who are breastfeeding should eat extra food and drink plenty of liquid every day.	____	____
11. It is advisable to give an extra bottle of milk or forumula if an infant appears to be hungry after breastfeeding.	____	____

GUIDELINES FOR SUCCESSFUL BREASTFEEDING

1. Breastfeed as soon after birth as possible.

The infant's suckling at the breast stimulates milk production. It also insures that the infant receives colostrum, the first yellowish liquid produced by the breast. Colostrum contains concentrated anti-infective agents that help protect the infant against sickness.

2. Breastfeed frequently (on demand).

The production of milk is stimulated by the baby's suckling so the baby should be fed on demand rather than according to a schedule. The more an infant breastfeeds, the more milk the breast will produce.

3. If possible, eat extra food every day.

During breastfeeding, the caloric needs of the mother are increased. It is estimated that an additional 500 calories per day are needed by the mother. If these calories are not available, the mother's fat supply will be used for milk production. Most women, even in countries where chronic malnutrtion is prevalent, are able to breastfeed their infants exclusively for 4-6 months. Research has found that breastmilk from undernourished mothers contains amounts of protein and lactose similar to those of well-nourished mothers. Emphasis should be placed on improving maternal diet before supplementing the diet of the breastfeeding infant.

4. Relax.

Breastmilk is released by the ejection or let-down reflex. It can be temporarily inhibited by tension or anxiety.

5. Do not give other foods and liquids until the infant is at least four months old.

Do not give other foods and liquids until the infant is at least 4-6 months of age. Breastmilk alone is generally sufficient until this age. Supplemental foods reduce the amount of time the infant sucks on the breast and therefore reduces the amount of milk the mother produces.

6. Avoid bottle feeding!

When the infant is 4-6 months of age, foods in addition to breastmilk can gradually be added to the infant diet. A cup and spoon should be used.

SESSION 2: HELPING MOTHERS BREASTFEED

Purpose:

In this session, trainees analyze some common reasons given for termination of breastfeeding and use of breast milk substitutes. They also discuss activities to promote successful breastfeeding in the community.

Time: 1 hour

Materials:

- Handout - "Helping Mothers Breastfeed"
- Trainer's Reference - Breastfeeding Case Examples
- Flipchart and marking pens

Steps:

1. Read Breastfeeding Case Example #1 to the group. Ask the following questions:

    - Why was the woman in this example weaning her daughter? (new pregnancy)
    - Is this a common problem in your area?
    - Is it necessary to terminate breastfeeding once you become pregnant?

2. Summarize the discussion. Although there are many taboos and cultural beliefs against breastfeeding when a mother becomes pregnant again, breastfeeding is not an uncommon practice during pregnancy in many developing countries. Beliefs in changes in breast milk volume or composition associated with a new pregnancy have not been confirmed by factual observations, nor have any ill effects been detected for either mother or infant. The main concern in such situations is that the mother's additional nutritional requirements are met. They will not be significant during the first trimester of pregnancy, a time when most lactating women would not even be aware of a new pregnancy.

3. Ask one of the trainees to read Case Example #2 to the group. In this example, the infant is not growing properly even though the mother is breastfeeding. Ask trainees to list the reasons why this infant might not be growing.

    Responses should include:

    - Giving other food decreases the suckling time at the breast, decreasing milk production

- Other foods may be contaminated and cause infections

4. Ask trainees what advice they might give the mother in Case Example #2. This can be done in a role play with discussion about the advice given.

5. The case examples describe several common reasons that women give for terminating and/or supplementing breastfeeding. Ask trainees: "What are some of the reasons given by women in your region who stop breastfeeding?" List these on the flipchart.

6. Discuss each of the reasons listed. You may wish to proceed with the following steps:

   - Distribute the Handout - "Helping Mothers Breastfeed." This handout lists common problems that can cause a woman to stop breastfeeding. Review each of the problems and the suggested solutions, referring back to the list generated by the trainees.

   - Identify the reasons on the list that are related to false beliefs or misconceptions. Give the facts. Discuss ways to change beliefs and dispel rumors through education and example.

   - Review the rules for successful breastfeeding. (Session 1)

   - Summarize: Most women can breastfeed succesfully if they have access to information and support from their family and community. Only in rare cases will breastfeeding not be possible.

7. Divide into small work groups. Ask each group to brainstorm a list of activities that community groups and community program managers could organize to promote successful breastfeeding. Allow 10-15 minutes, then ask each group to present its list of ideas. These might include:

   - Provide information and support for pregnant and breastfeeding women
   - Education of community leaders especially women to promote breastfeeding
   - Training of health workers and traditional healers, especially TBAs
   - Acting to stop the misleading promotion and sale of infant formulas and feeding bottles

- Support for legislation for policies that support breastfeeding, such as maternity leave, creches, nursing breaks, etc..

8. Summarize the session by emphasizing the important role that community members, especially women, can play in providing information and support to breastfeeding mothers.

HELPING MOTHERS BREASTFEED

POSSIBLE REASONS FOR TERMINATION OF BREASTFEEDING	SUGGESTED SOLUTIONS
Medical Practices that Promote Bottle Feeding: Hospital procedure may require separation of mother and infant at birth. Sugar water or formula may be given during this period thus interfering with the beginning of breastfeeding and milk production in the breasts. Health workers may also be poorly informed, recommending that a woman stop breastfeeding unnecessarily.	Promote rooming-in at hospitals. Eliminate bottle feeding of fluids to the infants. Talk to hospital officials about changing outdated practices that undermine breastfeeding. Train health workers to provide correct information to breastfeeding women.
Social Forces: The use of infant formulas and feeding bottles by upper class women, promotion by formula companies, and Western attitudes toward breasts and sexuality have resulted in an increase in bottle feeding among poor women.	Educate community leaders, women and men. Provide support and encouragement for breastfeeding women.
Insufficient Milk:	Encourage the mother to breastfeed the baby more often. If possible the mother should eat more food every day and drink lots of liquids.
Pregnancy: When a woman finds she is again pregnant, she may stop breastfeeding.	Do not stop breastfeeding abruptly. A healthy woman can continue breastfeeding while pregnant gradually weaning her child. Encourage her to eat additional body-building, energy protective foods.

Temporary Separation of Mother and Infant: If the infant is breastfeeding less often, less milk will be produced.	Breastfeed frequently when reunited. Express milk manually during the separation.
Working Outside the home: Undernourished women produce less breast milk.	Encourage women to breastfeed at night and frequently when with their infants. Educate employers. Promote the passage and enforcement of labor regulations that encourage breastfeeding such maternity leave, legislation, creches, and nursing education.
Maternal Illness:	Breastfeeding is contraindicated only in cases of severe maternal illnesses, for example in the case of heart failure, or severe kidney, liver or lung disease. Most common illnesses in mothers are not in themselves reasons not to breastfeed.
Low-Birth Weight Infant: A large proportion of low-birth weight infants (below 2500 g) are born at term and behave as fully matured infants.	They can and should be breastfed. If the infant is preterm and unable to suck properly, the mother can express her milk and feed her child manually. The food of choice for preterm infants is breastmilk.

BREASTFEEDING CASE EXAMPLES

To the Trainer: Develop your own examples to illustrate the most frequent causes of early termination of breastfeeding and inadquate milk production. Examples can also be developed as role plays or dramas.

1. An example from Kenya

A healthy 12 month old girl came to the monthly village weighing activity with her mother. The nutrtion worker congratulated her on how well her daughter was growing and encourages her to continue what she is doing. The mother is concerned because she has found out that she is pregnant and must stop breastfeeding. In Kenya, it is common for women to stop breastfeeding as soon as they find out they are pregnant again.

2. An example from Nepal

A three-month-old baby boy was brought to the village clinic with diarrhea and vomiting. The baby was pale and thin. When asked if she was breastfeeding, the mother said she was breastfeeding but that she did not have enough milk. To supplement her own milk she started giving buffalo milk in a bottle and porridge made from ground maize when the baby was about two months old. She said the baby had been sick with diarrhea three times in the last month and that he was getting thinner and thinner despite her efforts to feed him. The mother also looked pale and thin.

SESSION 3: BREASTFEEDING INFORMATION FOR KENYANS

Purpose:

In this session, trainees discuss the experience of a unique Kenyan organization, Breastfeeding Information Group (BIG), started in 1978 by breastfeeding mothers to promote breastfeeding in their country. Educational materials produced by BIG for use with health workers, mothers and fathers are provided for review and comment.

Time: 1 hour

Materials:

- One copy of the case study "Breastfeeding Information for Kenyans" for each trainee
- Multiple copies of educational materials developed by BIG and other organizations to promote successful breastfeeding
- Flipchart and marking pens

Steps:

1. Distribute the case study "Breastfeeding Information for Kenyans" to each trainee. Ask them to read the case study individually.

2. Divide trainees into small work groups of 5-7 persons each. (It is best to form homogeneous groups of people from the same regions, organizations, countries, etc. Groups will be discussing whether a project like the one in the case study could be organized in their own areas.) Ask each work group to discuss and answer the questions at the end of the case study.

3. Conduct a discussion based on the groups' answers to the case study questions.

4. Display or distribute copies of educational materials developed by the Kenyan Breastfeeding Information Group and other organizations. Encourage trainees to examine and/or copy materials that could be adapted for use in their areas.

5. Summary: Ask trainees to summarize the most important information presented in this session and/or unit. (You may also want them to state their impressions of the content and the methodologies used.)

CASE STUDY

MOTHERS AND CHILDREN
BULLETIN ON INFANT FEEDING AND MATERNAL NUTRITION

Volume 3, Number 1
January 1983
ISSN 0272-6917

Breastfeeding Information for Kenyans

Kenyan Mother and Baby

by the Breastfeeding Information Group, Nairobi

A widely circulated myth in Kenya holds that "African women all breastfeed." While it is true that almost all Kenyan mothers start breastfeeding (97% in 1977) old traditions of exclusive breastfeeding for the first months give way to social pressures and the ready availability of commercial products. Early supplementation has become the custom among many families.

A mother attending a clinic with her three-month old may say, "Oh, yes, I am breastfeeding," while a bottle of formula, mixed hours before peeps from her basket. There is no intention to deceive, only the fact that for many mothers today, "breastfeeding" automatically is taken to mean breast-plus-bottle. The bottle may be filled with water, a fruit-flavored drink or vitamin preparation, a glucose drink, or some kind of milk feed.

Few parents understand how this recent custom interferes with lactation. Often the health workers themselves do not realize this. In many cases the top-up bottle of glucose water for formula is started soon after delivery. In a nationwide study, researchers from the Breastfeeding Information Group and Ministry of Health found that 97% of the maternity unit nurses and midwives surveyed felt that babies should have pre-lacteal supplements of glucose water or formula, and 95% actually give them. (Veldhuis, Nyamwaya, et al, 1982). This routine once established is continued at home.

> *"Unfortunately I was never advised about breastfeeding before my baby was born. However, after I had the baby there was advice from all sides to breastfeed. I have tried my best in this effort but the baby is not satisfied. She is 15 days old and keeps crying when she is hungry until I feed her the formula milk. Please advise." Mrs. P.K. (Kisumu)*

With this pattern widespread, it is not surprising that mothers who are sincerely trying to do their best for their babies experience two very common problems: "I don't have enough milk to satisfy my baby," and "the baby refuses my breast and prefers bottles."

The Breastfeeding Information Group (BIG) was started quite informally by a group of seven women to provide help with these kinds of breastfeeding problems. At first we discussed what we knew about breastfeeding, problems we had observed and experienced, and what activities might be useful in Kenya. By late 1978, we had decided to register officially as a voluntary society with a constitution and officers, and to offer advice directly to mothers and also through posters and leaflets on breastfeeding topics.

Parents have responded enthusiastically to talks we have given at clinics, meetings of women's groups, and also to our printed materials. Our attempts to hold special breastfeeding mothers discussion meetings outside the clinic atmosphere have not, on the other hand, drawn more than a handful of participants. In Kenya, breastfeeding help on a mother-to-mother basis seems best given through existing social communities.

We use every medium we can to reach people. The letters quoted in this article were selected from 42 responses to a 'Letter to the editor' which appeared in the Kenya *Daily Nation* in September, 1982. Such publicity reaches a far wider public than the clinics do and draws a varied response.

We answer all enquiries individually. We have responded to frequent questions by developing leaflets. For

continued page 2

Weaning Food Demonstration

B.I.G.: Solving Problems

continued from page 1

example, Kenyan men have frequently asked what they can do so we wrote a leaflet called, "Please help your wife to breastfeed." This leaflet is now being translated into Swahili. It joins a number of other leaflets for parents, and a booklet for health workers. Funds for publishing and for the free distribution of our materials were provided by UNICEF and OXFAM.

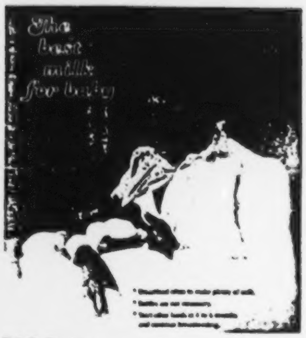
Answering letters, working on publications, and giving talks are frequently done by volunteers temporarily resident in Kenya who can donate substantial time to the Breastfeeding Information Group. Increasingly, Kenyans are taking active roles, even though most of them have full time jobs and families to look after. Among our approximately 40 active members in Nairobi, many donate between five and fifteen hours per week to our work. Although we always use breastfeeding mothers to work directly with other mothers, we also value active members who are men, single women, and mothers who could not breastfeed due to lack of information. Throughout the country, we have between 200-250 paying members, including many health workers and teachers. For their yearly membership fee, (about U.S. $1.50) they receive our bi-monthly newsletter. The majority of our officers and members are Africans, but Kenya's Asians and whites also participate.

Through reading and discussion classes, we provide training to our volunteers, and we also maintain a library they can use. Thanks to a grant from OXFAM we can now pay two Kenyan counselors to work with Swahili-speaking mothers. Our policy has always been to give help where we are asked, and this means that we work with every sector of Kenyan society from the busy attorney in her Peugeot, to the illiterate mother struggling to support her children alone; from the well-to-do homes of business people to the disadvantaged urban squatters. In the next few years, we expect to strengthen and expand our outreach into the rural areas through existing women's groups, and the rural health service networks.

On a typical day, one of our members might give a talk to patients waiting for treatment at the Mathare Valley Baptist Clinic, in one of Nairobi's poorest areas, and then go on to nearby Pumwani Maternity Hospital where about 100 women crowd the antenatal clinic. In this city-run hospital, the management of breastfeeding is good, but nurses are usually too rushed to discuss mothers' questions in detail. So the counselor explains the superiority of breastfeeding, how to have plenty of milk, when to add other foods, and the like. She hands out simple leaflets in Swahili for women whose reading skills may be newly acquired.

Today at the Kawangware-Kabiro Clinic, there is a weaning food demonstration using common local foods to make a nutritious low-cost porridge. The clinic is located in a peri-urban, low-income area and is headed by one of our members. The mothers at the clinic have been actively discouraged from the use of supplementary bottles. If a mother comes to the clinic with a feeding bottle, she usually agrees with the nursing sister to exchange it for a cup, and instructions on how to feed with cup and spoon.

In another part of the city, in a private hospital with poor breastfeeding practices (timetable feeds, no rooming in, top-up bottles, and a formula gift pack for every new mother), an expatriate counselor sits with a group of 15 to 20 mothers who have recently delivered. She emphasizes how the home pattern of breastfeeding should differ from the hospital routine. Developing a good milk supply, promoting the let-down reflex, and preventing breast refusal dominate the discussion, and the points made are reinforced with this very literate group by a set of


The best milk for baby

B.I.G. Poster

homemade teaching posters. In this hospital, with its well-educated private patients, most will be returning to jobs soon:

> *"I am expecting my first baby this year and I am a working mother. I will be allowed two months maternity leave. What advice would you give to a working mother who would love to breastfeed but is unable to do so since she is away most of the day?" Mrs. A. D. (Nakuru)*

> *"I am a young mother of one child aged four months. I really find it difficult to cope up with breastfeeding since I work in an office far away from home. I would be very grateful if you could send me your leaflets on increasing one's breast milk, and managing a job and breastfeeding." Mrs. G. I. (Nairobi)*

For most urban women in Kenya, workplace child care is not available and returning home during the workday to breastfeed is not possible. We encourage working women to continue breastfeeding at whatever level they can manage, leaving some suitable alternative feed to be given by teaspoon or cup. We also stress the value of extra breastfeeding over weekends and holidays, and the importance of close contact and demand feeds during evenings and nights.

In addition to advising mothers, we also distribute materials throughout the country. Our literature reaches a much wider audience, and we consider it essential to our efforts. Our literature reaches all sorts of people—nurses and mothers of course, but also school girls, church groups—anyone who asks may have it. In the future we plan to do more training of health workers. Our study with the Ministry of Health indicated many areas where nurses do not know enough about breastfeeding management. For example, if a one or two month old child shows insufficient weight gain, more than 3/4 of our health workers would at present recommend use of formula, rather than first trying to increase the child's intake of breast milk. In cooperation with the Ministry of Health, we are starting to provide speakers for in-service training workshops, and occasionally organizing our own.

Of course public policies also affect breastfeeding. We are working with health professional organizations and women's organizations to try to establish in Kenya a national Code of Marketing based upon the WHO/UNICEF international model. This effort takes a tremendous commitment of time, but in the long run will be a powerful protection for breastfeeding mothers and babies. Our International Cooperation Committee is coordinating similar breastfeeding support efforts in other African countries, through the IBFAN (International Baby Foods Action Network)-Africa Network.

How do we get it all done? We often wonder. We have been fortunate in having many excellent officers, elected annually. Several are nurses, midwives, doctors and nutritionists. We take care to avoid a situation where the Breastfeeding Information Group might come to be seen as a personal power base for individuals, and we emphasize cooperative effort. Through our numerous committees (including publications, counseling, research, newsletter, fund raising) we give a responsible job to any member who wishes one. Each of us get a great deal out of working together, on this matter so close to our hearts which also builds the nation. Throughout all our work runs a common aim: to give parents the information and encouragement they so urgently ask for.

For copies of Breastfeeding Information Group (B.I.G.) publications including an article on starting a group, write the Clearinghouse on Infant Feeding and Maternal Nutrition, 1015 15th Street N.W., Washington, D.C. 20005, U.S.A. The Clearinghouse would also be interested in information about other groups involved in similar kinds of breastfeeding support activities.

The Breastfeeding Information Group cannot engage in extensive overseas correspondence, but welcomes letters from people in Africa who would like to be on the IBFAN-Africa mailing list. Breastfeeding Information Group materials are not copyrighted and may be reprinted or adapted to conditions elsewhere. If the text is modified however, please contact the Breastfeeding Information Group, P.O. Box 59436, Nairobi, Kenya.

Note to Readers:

In November 1982, an international meeting of community-based breastfeeding support groups was held in Jamaica. Representatives from organizations in more than 20 countries attended (including the Breastfeeding Information Group). For more information about the conference recommendations, write: Ron Israel, INCS, Education Development Center, 55 Chapel Street, Newton, Massachusetts 02160, U.S.A.

Mother and Baby, Kawangware, Kenya

DISCUSSION QUESTIONS

Case Study: Breastfeeding Information For Kenyans

1. What is the goal of the Breastfeeding Information Group?

2. What activities does the group carry out to reach that goal?

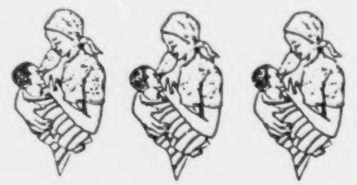
3. Who started the Breastfeeding Information Group? Who carries out the work of the group now?

4. How does the group raise funds for its activities?

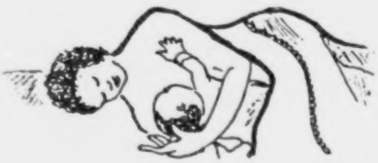
5. What aspects of the Breastfeeding Information Groups's program would be beneficial and feasible in your area?

How to have plenty of milk

Breastfeed often

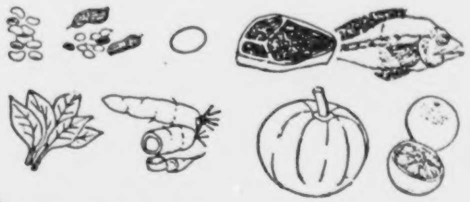


- Start breastfeeding as soon as possible after birth. Most babies can suck well right after being born. The baby needs your colostrum in order to be healthy.
- Breastfeed the baby whenever he is hungry. This may be ten or more times each day. The more the baby sucks, the more milk supply you will produce.
- Night feedings help to develop a good milk supply. Keep the baby close to you at night.
- Give both breasts at each feeding. Let the baby suck as long as he wants.
- Do not give glucose water or other milk from a bottle between breast feeds. If you think that you do not have enough milk, give extra breast feeds to increase your milk production. Do not give other foods instead of the breast.
- Do not stop breastfeeding. Breastfeeding is still good even when your child is two years old, or older. Most babies will give up breastfeeding (wean) slowly, some time between the ages of one and three years. This is natural weaning. You do not need to hurry it.
- When the child is four to six months old, breast milk alone is no longer enough. Start giving other foods in addition to (not instead of) breast milk.



Take care of yourself

- Be sure you drink plenty of liquids every day.
- Eat energy, protective, and body-building (protein) foods. All help you make milk.
    - energy foods: porridge, ugali, sweet potatoes, arrowroot, bread, rice
    - protein foods: beans, peas, cow or goat milk, eggs, meat, fish
    - protective foods: fruits and vegetables such as papaya, mango, carrots, spinach
- Rest whenever you can. Sometimes breastfeed lying down.
- Use family planning to space your children. If possible, use any method except pills. The pills can reduce your milk supply.



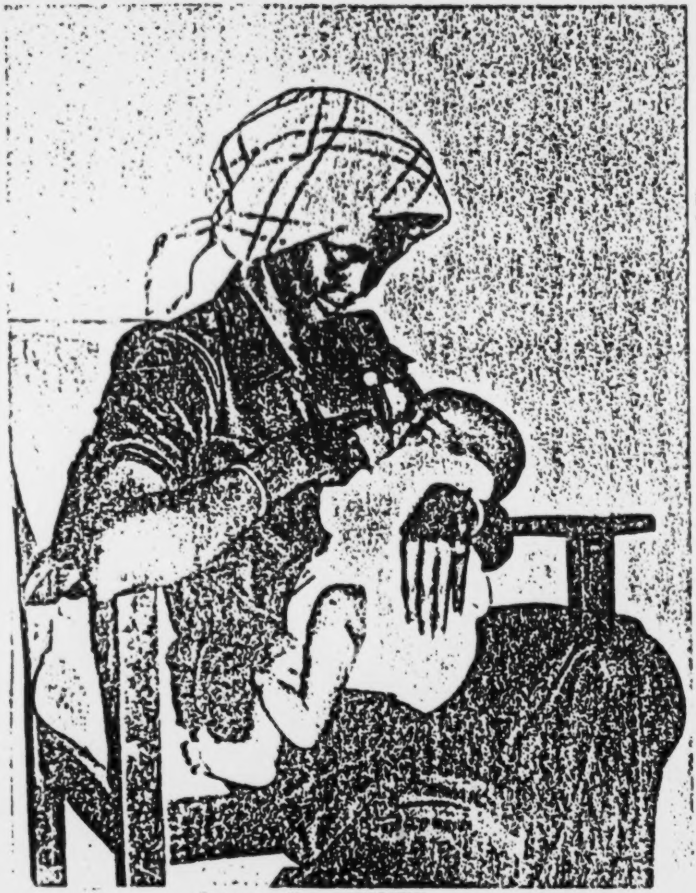
Do not worry

- Do not worry about days when the baby cries more than usual. Comfort him by letting him suck.
- Do not worry about small or soft breasts. After the first days or weeks, your breasts will probably not leak milk. They may not be hard or large. But you still have plenty of milk. It does not simply go away. It will flow when your baby sucks.

If you have any more questions about breastfeeding, please write to:

Breast feeding Information Group PO Box 59436 Nairobi

BEST COPY AVAILABLE



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WHY BREASTFEED?

BECAUSE BREASTMILK IS BETTER THAN ANY OTHER MILK FOR YOUR BABY

- Breast milk is the best food for your baby. He does not need any other food for the first four months of his life.
- Breast milk is always clean, always ready, and always warm enough. Night feedings are easy.
- A baby digests breast milk easily. This means he has fewer stomach problems.
- Babies who get only breast milk do not get constipation.
- Breastfed babies get more protection against diarrhoea, colds, flu and skin problems. For two to three days after you give birth, a special milk (colostrum) comes from your breasts. This colostrum gives your baby special protection.
- Sucking at the breast helps your baby's tooth and jaw development.
- Breastfeeding saves you money because you do not need to buy costly artificial milk foods.
- Breastfeeding develops close and loving feelings between baby and mother.

Breast feeding Information Group PO Box 59436 Nairobi

BEST COPY AVAILABLE

Please help your wife to breastfeed

DO YOU KNOW THAT YOUR WIFE NEEDS MORE TO EAT during pregnancy and during breastfeeding (for at least two years)?

- Be sure you bring home protein foods e.g. beans, ndengu, groundnuts, meat, fish, eggs, milk. Be sure your wife eats plenty of these.
- Also she needs some extra protective foods (fresh fruits and vegetables) and energy foods. Encourage her to have bread, bananas, cassava, potatoes or groundnuts with her morning tea.

DO YOU KNOW SHE ALSO MUST HAVE PLENTY TO DRINK?

- Make sure she has something to drink each time the baby suckles: tea, uji, water, squash, or any other drink.

Enough food for the mother means enough breast milk for the baby. And buying some extra food for the mother is cheaper than buying tinned milk for baby!

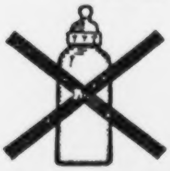
DO YOU KNOW THAT YOUR WIFE NEEDS YOUR APPROVAL FOR BREASTFEEDING? If she thinks that you don't care, she may give up.

Tell her, and tell your relatives and friends, that you are proud your baby is being breast fed. Remind them why breast milk is the best baby milk:

- It is free from germs and it protects baby against illnesses. Baby will be healthiest on breast milk. (Not so much diarrhoea or colds).
- It has the correct temperature and is always ready.
- It is easily digested by the baby. (Not so many stomach problems and allergies)
- It is inexpensive. (No extra expenses for bottles, tinned milk, fuel, etc.)
- Baby is happier close to mother, nights are quieter, and parents sleep better.

DO YOU KNOW THAT YOUR WIFE NEEDS REST? An exhausted woman has trouble producing enough milk.

- See what you can do to lessen your wife's burdens so that she may sometimes rest.



DO YOU KNOW THAT GOOD ADVICE CAN SOLVE BREASTFEEDING PROBLEMS? For example, the milk supply can be increased at any time if you only know what to do. If your wife's milk is "going away," encourage her to put the baby to the breast as often as the baby demands. More sucking makes more milk. For the safety of your baby, don't allow the use of feeding bottles unless the clinic or doctor has prescribed them for a special reason.

DO YOU KNOW THAT WHEN YOUR WIFE IS RELAXED AND HAPPY, MILK FLOWS WELL?

- Keep your wife as happy as you can. Avoid quarrels.
- Listen if she talks about her worries and try to help her solve any problems.
- Be sure you are at home enough to give her real help with the other children.

DO YOU KNOW THAT GRADUAL WEANING IS IMPORTANT TO YOUR CHILD'S HEALTH?

- Encourage your wife to continue breastfeeding until the baby is two years old. (If she goes out to a job, she can still breastfeed when she is at home.)
- Other foods should be added to the baby's diet starting when he is about four months old.
- Agree with your wife on a family planning method so that another pregnancy will not come sooner than you want. Baby should be eating many other foods and drinking from a cup before the next pregnancy is begun.

With your help and encouragement, your wife can breastfeed happily.

For more information or advice, please write to us ✱ Breastfeeding Information Group ✱ P.O. Box 59436, Nairobi

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UNIT 4

INTRODUCING WEANING PRACTICES IN THE COMMUNITY

SESSION 1: Changing Weaning Practices

SESSION 2: Making Improved Weaning Foods in the Home

SESSION 3: Weaning Food Practice

SESSION 4: Case Study: Village Weaning Food Projects in Thailand

SESSION 5: Weaning Foods - Village Production Techniques

SESSION 1: CHANGING WEANING PRACTICES

Weaning practices are often the most important causes of malnutrition in children from six months to three years of age. Habits of child feeding are based on the quantity and quality of food available; on beliefs about what is and isn't good for young children; on time available for food preparation; and on custom. Recommendations for changes in weaning practices must be practical and they must be **acceptable** to the community.

Purpose:

In this session, participants analyze common weaning practices in their regions and develop strategies for changing the current practices that result in malnutrition of weaning-age children.

Time: 1 1/2 - 2 hours

Materials:

- Flipchart and marking pens
- Handout - "Guidelines for Weaning"
- Handout - "Changing Weaning Practices"

To the Trainer:

Before this session, write a short description of the common weaning practices that are detrimental to the nutrition of weaning-age children. The problem statement can be written directly on the Handout - "Changing Weaning Practices," or it can be copied and distributed separately. An example is provided on the handout.

Steps:

1. Distribute the Handout - "Guidelines for Weaning" and review with the trainees.

2. Ask trainees to think of the common weaning practices in their areas by answering the following questions:

   - At what age are the first foods other than breast milk given to children
   - What foods are routinely given to children six months to two years old (daily)
   - What foods are never given
   - How many times a day are young children fed
   - At what age do most women stop breastfeeding their children

3. Conduct a discussion of common weaning problems by asking trainees to compare the practices in their areas to the "Guidelines for Weaning."

4. Ask trainees to explain why they think families follow the current weaning practices. Summarize their responses giving emphasis to the following points:

   - Foods are sometimes not available
   - Mothers (and fathers) do not have enough time to prepare food and feed young children
   - Beliefs about foods for young children restrict the foods they are given to eat
   - Customs or habits of feeding
   - Lack of knowledge about food and nutrition

5. Divide trainees into small work groups (5 - 7 persons from the same region if possible). Distribute the Handout - "Changing Weaning Practices" to each trainee. In this activity, work groups will develop plans for improving weaning practices in a village. A problem statement describing the specific weaning behaviors that they have been asked to improve should be given to each group.

6. Tell work groups that their plans should describe **what** they will do and **how** they will do it. Plans should be:

   - Practical or "doable" with the resources of most families
   - Acceptable to the families

7. When work groups finish, ask each group to describe the changes in feeding practices they would recommend and their plan for helping families in the project area change these practices.

8. Point out similarities and differences in the plans. Make a list on the flipchart of the types of activities proposed by the work groups. Add other activities that might be appropriate.

9. Congratulate trainees on their efforts and remind them that every plan for change will be slightly different based on the experience, training and perceptions of the group members as well as the information they have about attitudes and practices in the community. As community project managers, we should be ready to change our plans as our information and experiences increase and as conditions change in the community.

GUIDELINES FOR WEANING

Weaning is the period when new foods are introduced to a child's diet while breastfeeding continues. The weaning period begins between four and six months and may continue until about three years of age.

1. Breastfeeding alone is normally sufficient until an infant is 4-6 months of age.
2. From 4-6 months, soft foods should be added gradually to the diet.
3. When foods are first introduced they should be mashed smoothly; bv about nine months, foods can be finely chopped; by two years, most children can manage adult foods.
4. From six months to two years, a child should be fed four to six small meals each day in addition to breastfeeding.
5. After six months, an infant should be eating body-building, energy and protective foods plus breast milk every day.
6. Food for young children, once prepared, should never be stored without refrigeration for more than two hours.
7. The hands of both mother and child should be washed before handling food.
8. Use a clean cup and spoon for feeding young children - never use feeding bottles!

CHANGING WEANING PRACTICES

1. **Problem Statement**

   Example: 40 % of the children ages 1-3 years in our project area are suffering from malnutrition. Mothers breastfeed until their children are 2-3 years, but in most villages, other foods are not given regularly until children are 9-12 months old. Young children are fed a constant diet of maize porridge, banana, cassava and other starchy foods. Even though body-building foods like beans and eggs are produced by most families, they are rarely given to young children. Since it is customary to eat two meals a day, young children are fed in the morning and again in the evening when their parents finish work in the fields.

2. **What changes in feeding practices would improve the nutrition of weaning-age children in this project area?**

3. **What actions could be taken to help families change their current weaning practices?**

SESSION 2: MAKING IMPROVED WEANING FOODS IN THE HOME

High quality weaning foods can be made from the foods found in most homes. Individual and group education activities in the community should include practical recipes and demonstrations of improved weaning foods made from locally available ingredients.

Purpose:

Using the Weaning Food Square, trainees will develop improved weaning mixes from foods available in their regions. They will discuss alternative methods for home preparation of weaning foods and answer a simple set of questions to predict acceptance of new weaning food recipes.

Time: 1 hour

Materials:

- Flipchart and marking pens
- Handout - "Making Improved Weaning Foods Using the Weaning Food Square"
- Handout - "Why Add Energy Supplements to Weaning Foods?"
- Large drawing of the Weaning Food Square
- Samples or pictures of local foods

Steps:

1. Introduce the session topic. Emphasize the need to give families practical advice about improved weaning mixtures that can be made from foods found in the home, with little or no extra work.

2. Post a large drawing of the Weaning Food Square at the front of the room, and explain that it can be a useful tool for planning improved weaning recipes from foods in their regions.

3. Describe each section of the Weaning Food Square and the types of foods belonging in each one. Ask trainees to name the foods grown or sold in their regions that belong in each section of the square. Write the names of the foods mentioned, or attach pictures of the foods, to the correct section of the large Weaning Food Square.

4. Distribute the Handout - "Why Add Energy Supplements to Weaning Foods?" and discuss with trainees.

5. Distribute the Handout - "Making Improved Weaning Foods Using the Weaning Food Square." Divide trainees into work groups of 3-4 persons each. Each work group will

develop at least three improved weaning foods by completing the steps on the handout.

6. Review the steps on the handout one at a time, allowing work groups 5-10 minutes to complete each step before proceeding to the next.

7. When you reach Step 3 - Preparing Ingredients, make the following points. There are three principal ways of preparing improved weaning foods:

   - Using foods from the family's meal
   - Adding one or more new ingredients to the traditional porridge or gruel fed to infants
   - Combining ingredients that are not typically used for child feeding in a new recipe

   Simple methods of preparation that are the same as those used in every day food preparation are most likely to be accepted.

   Methods of preparation that reduce extra cooking time will also guarantee that a weaning food recipe is prepared often.

8. Concerning Step 4 - Calculating Amounts of Ingredients: Nutritionists familiar with the nutrient values of local foods should calculate average portion sizes for each commonly available ingredient. Trainees should be given portion sizes for raw and cooked foods in terms of volume (ml) and common household measures (i.e., tea cup, eating spoon), as in the upcoming Example. The basic goals for a weaning food serving for one child, for one meal are:

   - 300-350 kilo calories;
   - 5-6 grams of reference protein;
   - 200-300 ml volume.

   A table showing the approximate raw weights and proportions of staple and protein supplements to achieve these goals is provided as a trainer's reference on page I-4,9.

9. When work groups finish Steps 4 and 5, ask them to write their completed recipes on newsprint and to present them to the group.

10. Use page 6 of the handout, to give each of the recipes a score for predicted community acceptance. Discuss the advantages and disadvantages of specific recipes with the group.

Look for recipes that build on traditional methods of food preparation and those that require little extra time for preparation!

11. Ask work groups to select 1-2 of their recipes for demonstration. (In some cases, the trainer may want to choose recipes to assure that a variety of weaning mixes are made.) Work groups should plan their demonstrations, listing and, in some cases, collecting needed supplies and cooking utensils.

Go on to Session 3!

EXAMPLE

STANDARD PORTION SIZES FOR WEANING FOOD INGREDIENTS

Ingredients	Raw Volume	Cooked Volume
Staple		
Rice	100 ml (1/2 tea cup)	200 ml (1 tea cup)
Maize	100 ml (1/2 tea cup)	300 ml (1 1/2 tea cup)
Protein Supplement		
Legume	30 ml (2 tablespoons)	60 ml (5-6 tablespoons, 1/4 cup)
Milk (whole, liquid)	180-200 ml (1 tea cup)	same
Vegetable Supplement		
Leafy green	-	20 ml (1-2 tablespoons)
Squash/ Carrot	-	
Energy Supplement		
Oil, Fat	5-10 ml (1-2 teaspoons)	same
Sugar	10-20 ml (1 tablespoon)	

A table of this type should be developed locally to be included on page 3 of the Handout - "Making Improved Weaning Foods Using the Weaning Food Square."

Table 22. *Calculated amounts of ingredients for Basic Mixes – using edible portions of raw foods*

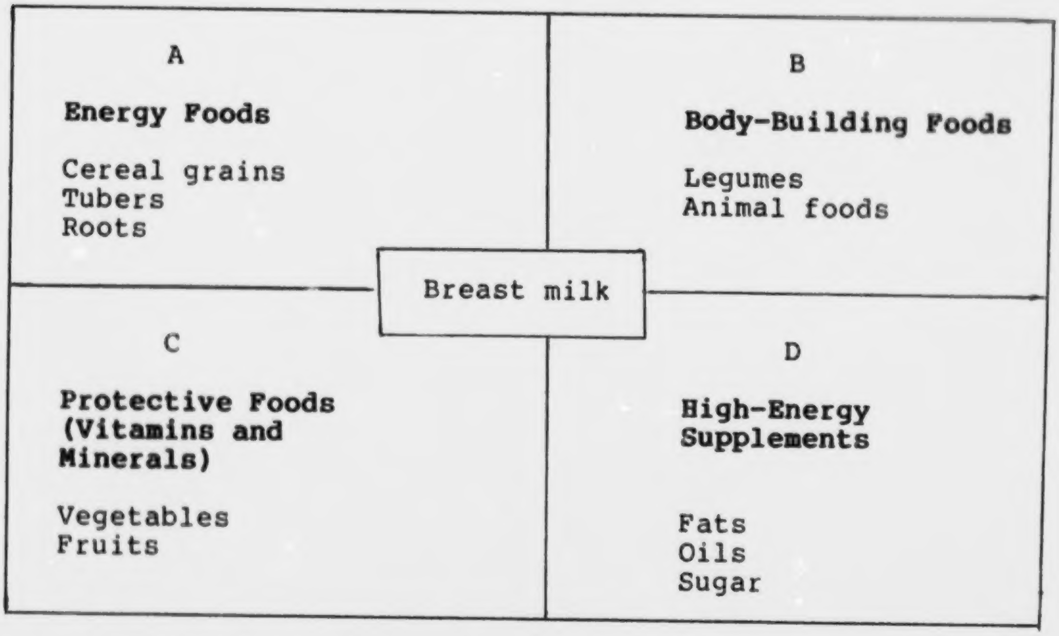
Staples (g) / Supplement (g)	Oats	Wheat	Rice	Sorghum, millet	Maize	Potato	Sweet Potato	Yam	Taro, Cocoyam	Banana	Plantain	Cassava Flour, gari
Legume (g)	75 5	80 10	65 25	75 10	55 35	320 20	125 50	165 40	150 45	105 55	85 55	40 55
Soybeans (g)	60 10	60 15	55 20	55 15	50 25	250 20	150 25	175 20	150 20	140 25	115 30	50 30
Dried skimmed milk (g)	65 5	65 10	65 15	60 15	60 15	280 15	175 20	190 15	180 15	165 20	150 20	60 20
Dried whole milk (g)	55 10	55 15	45 25	45 20	40 25	220 20	100 30	115 30	115 25	100 30	90 30	35 30
Chick or lean meat (g)	65 10	65 20	65 25	65 25	65 35	300 25	180 35	210 35	195 30	185 40	160 45	70 45
Fresh fish (g)	65 15	70 30	70 30	70 25	70 20	310 25	210 35	240 35	220 40	210 40	180 45	75 50
Egg (g)	65 10	65 25	65 30	60 30	65 25	300 25	180 35	220 25	190 25	190 30	150 45	60 50

1. The basic mixes have been calculated to give the best possible protein value (i.e. amino-acid score). The least amount of protein food is used to supplement the staple to provide the basis of a meal for a child of about two years of age.
2. To each of these basic mixes 10 g of oil *OR* 5 g of oil and 10 g of sugar *OR* 20 g of sugar should be added.
3. Each mix then provides about 350 kcal (approximately one-third of the daily needs of a two-year-old child).
4. Each mix has the same protein value and provides the approximate equivalent of 5–6 g of reference protein.
5. The weights given for the staple and the supplement are for raw foods. See Chapter 15 for variations for the supplements.
6. The volumes of most of the basic mixes are between 200–300 ml when the water absorbed by the food is taken into account.

Cameron, M. and Hofvander, Y. Manual on Feeding Infants and Young Children, Oxford Press, 1983, p. 119.

HANDOUT

MAKING IMPROVED WEANING FOODS USING THE WEANING FOOD SQUARE



A

Energy Foods

Cereal grains
Tubers
Roots

B

Body-Building Foods

Legumes
Animal foods

Breast milk

C

Protective Foods (Vitamins and Minerals)

Vegetables
Fruits

D

High-Energy Supplements

Fats
Oils
Sugar

Breast milk is in the middle of the Food Square because it is a complete food until a child reaches 4-6 months of age.

By the time a growing child is six months old, he needs breast milk plus foods from each of the other parts of the Food Square every day.

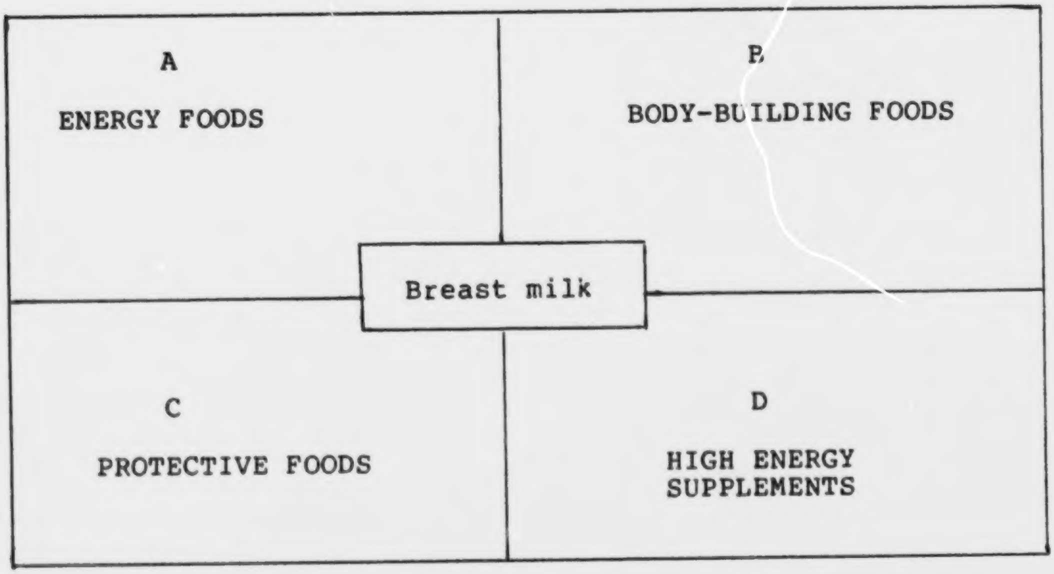
Recipes for improved weaning foods can be made by combining at least one food from each part of the Food Square. Recipes should include:

An Energy Food: This is usually a cereal grain like rice, corn, wheat, sorghum, millet or oats. It can also be potato, cassava, yam, banana or plantains, and other starchy roots.

A Body-Building Food: All legumes and animal products such as meat, milk, fish, eggs, chicken, etc., are included in this box. Choose a low-cost food that can be found in most homes. This will usually include legumes, eggs and fish.

A Protective Food: These include all leafy green vegetables and fruits.

A High-Energy Supplement: All oil, fats, natural and processed sugars including honey.


A
ENERGY FOODS
B
BODY-BUILDING FOODS
Breast milk
C
PROTECTIVE FOODS
D
HIGH ENERGY SUPPLEMENTS

To make your own recipes for improved weaning foods, follow these steps:

Step 1. **Classifying Local Foods:** In each of the parts of the Weaning Food Square above, write the appropriate foods available in the homes of most families you work with. Use the description on the first page of this worksheet to decide in which part (A, B, C, D) the foods belong.

Step 2. **Choosing Ingredients:** Choose at least one food from each of the parts of the square. Practice making different combinations from the available foods by completing the exercise below:

Recipe 1	Recipe 2
A. ______________	A. ______________
B. ______________	B. ______________
C. ______________	C. ______________
D. ______________	D. ______________

Note: Unless animal foods are produced by the families or available at very low cost, they should be not included in your recipes. Always choose foods that most families grow or produce or those that you will help them produce as part of your project.

Step 3. **Preparing Ingredients:** On the worksheet that follows, describe how you will prepare the foods for each recipe. First, write the ingredients for your recipes in the spaces provided, then describe how they will be prepared and how much time it will take. (Page 5)

Preparation should be simple, involving as few steps as possible. It should not take too much time. Preparation of foods for children from six months to one year requires mashing and straining. For children 1-3 years, it may include chopping or mashing. Foods may be cooked together or cooked separately and then combined in the meal. The simplest and most successful recipes are usually those that use foods from the family meal, which are separated once cooked, and are prepared according to the ages of the children.

Step 4. **Calculating Amounts of Ingredients:** The amount of each food in a recipe depends on the number of children to be served, the ages of the children and whether you are using foods that are raw or cooked.

Use the following chart when figuring how much of each food to use in your recipe. These amounts are based on the needs of one child age 1-2 years, for one meal. For younger children use less of each ingredient, but make sure they are in the same proportions. For older children, add a little more of each.

Standard Portion Sizes for Weaning Food Ingredients*

	Raw Volume	Cooked Volume
Staples		
Protein Supplements		
Vitamin/Mineral Supplements		
Energy Supplements		

* To be developed by local nutritionist prior to training.

Step 5. **Meals for More Than One Child:** Calculate how much of each ingredient will be required to prepare the recipe for several Children. Do this by writing the amount of cooked or raw ingredient you will use for one child, on the worksheet. Write this amount in local measurements, i.e., 1 handful, 1 1/2 tea cups, 1 eating spoon, etc. Multiply by the number of children the recipe will serve to find the total amount of each ingredient needed.

You have now developed several recipes for improved weaning foods using the foods available in most of the homes in your area. Once you learn the approximate amounts and types of foods to use, you will be able to develop improved weaning foods without the help of this guide.

REMEMBER: **Improved weaning foods include at least one food from each of the sections of the Weaning Food Square.**

Successful recipes for improved weaning foods are simple and require little extra time.

Ingredients for improved weaning foods must be those available in every home.

WORKSHEET:

Recipe 1

Ingredients	Amount for One Child	X	Number of Children	X	Amount Needed
A. __________	__________	X	_________	X	________
B. __________	__________	X	_________	X	________
C. __________	__________	X	_________	X	________
D. __________	__________	X	_________	X	________

Describe the preparation and cooking time and other ingredients.

____

____

____

Recipe 2

Ingredients	Amount for One Child	X	Number of Children	X	Amount Needed
A. __________	__________	X	_________	X	________
B. __________	__________	X	_________	X	________
C. __________	__________	X	_________	X	________
D. __________	__________	X	_________	X	________

Describe the preparation and cooking time and other ingredients.

____

____

____

PREDICTING THE ACCEPTANCE OF A NEW WEANING FOOD

First, calculate the cost for four or five servings of the new weaning food $____________.

	Yes	No
Then answer the following questions for each new recipe:		
- Is the cost of the weaning food reasonable when compared to the resources of poor families?	____	____
- Are all of the ingredients required available in most homes?	____	____
- Are the ingredients that are not available in most homes available at low cost in the community market?	____	____
- Is total preparation time 10 minutes or less? (If the weaning food is cooked with the family's food, mark yes.)	____	____
- Is the weaning food prepared the way that most foods are prepared or together with the family's food?	____	____
- Are all of the ingredients believed to be good for children?	____	____
- Does the weaning food taste and look like the food eaten in the community?	____	____

Give each recipe a score:

Each "No" receives 0 points.
Each "Yes" receives 1 point. Now, add the total score.

TOTAL ☐

A perfect score of 7 means that we can predict good acceptance of the new weaning food. Lower scores may mean that a recipe will need extra promotion to gain acceptance in the community.

A score of 5 or less, may mean that a recipe is not likely to gain the acceptance of the community.

If the cost of the new weaning food is too high, it will not be accepted by the community.

HANDOUT

WHY ADD HIGH-ENERGY SUPPLEMENTS TO WEANING FOODS?

A small child can only eat a small amount at one time: about one and a half cups of food by one year of age. In order to get maximal energy, a child must eat several small meals during the day, and those meals must include as much energy as possible.

Oils, fats and sugars contain large amounts of energy. For example, 1 tablespoon of oil contains the same amount of energy as 3 1/2 tablespoons of uncooked maize flour, or more than 7 tablespoons of cooked maize flour.

By adding a little oil, fat or sugar to a child's food we can increase the amount of energy without increasing the amount of food.

Adding oil also reduces the amount of food to be eaten because less water can be added to porridges and gruels when they are cooked. A little oil keeps porridge smooth, with less water.

The following examples show how energy supplements improve the nutrition quality of weaning foods.

EXAMPLE 1

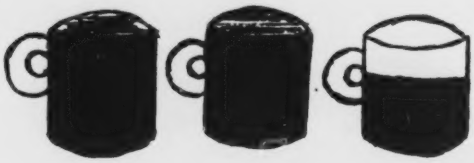
1/2 cup maize flour (uncooked)
+
water = 235 energy units

1/2 cup maize flour (uncooked)
+
1 teaspoon oil
+
water = 315 energy units

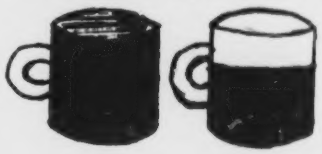
EXAMPLE 2

To get as much energy as he needs from one meal during the day, a child of one year must eat:

more than 2 cups of porridge if it is made with only maize flour and water



1 1/2 cups of porridge if it is made with maize flour and a high-energy supplement



QUESTION: What will happen to a child who is fed porridge **without** a high-energy supplement?

ANSWER: Because the child can only eat about 1-1 1/2 cups of porridge at one meal, if he is fed porridge without a high-energy supplement he will not get the energy he needs from three meals a day. He will become malnourished.

SOLUTION:

- Encourage the addition of high-energy supplements to all weaning foods.
- Encourage four to five small meals for children during the weaning period. Feed small children frequently with high energy weaning foods.

  Note: A little bit of oil or sugar is enough! Be careful not to add too much. Mothers will tell you that too much oil can cause diarrhea in young children.

SESSION 3: WEANING FOOD PRACTICE

Purpose:

Trainees prepare and demonstrate the preparation of improved weaning foods appropriate for introduction to the community.

Time: 2-3 hours

Materials:

- Handout - "Conducting a Community Weaning Food Demonstration"
- One set of cooking utensils and equipment for each work group including cups, bowls, spoons of various sizes, cooking stoves, grinders, sieve, etc. All utensils and equipment should be similar to those used in most homes in the community
- Foods to be used in the preparation of weaning mixtures
- Space for work groups to cook and demonstrate their recipes
- Water
- Flipchart and marking pens

Steps:

1. Arrange the training area and equipment so that each work group has a space for cooking.

2. Review the characteristics and steps of an effective cooking demonstration. Include the points on Handout - "Conducting a Community Weaning Food Demonstration."

3. Allow work groups to prepare their ingredients.

4. Each group should demonstrate preparation of at least one weaning food recipe. If time is limited, work groups can be paired. In this case, one group presents its demonstration for the other's comments and vice versa.

5. Encourage trainees to learn from the reactions of families in their communities to the new weaning recipes. Women often make modifications in new recipes to reduce preparation and cooking time. They may also vary ingredients to improve taste and color according to local preference. Incorporating the changes made by women in the community will often make the new weaning recipes more appropriate and acceptable.

CONDUCTING A COMMUNITY WEANING FOOD DEMONSTRATION

1. Choose a recipe that calls for no more than 3 or 4 foods that can be found in most homes at the time of the demonstration.

2. Use utensils and cooking stoves that are like those in most homes.

3. Begin the demonstration by explaining why it is important to prepare improved foods for weaning-age children. Review the types of foods young children need, when soft foods should be added to the diet and the importance of frequent feeding for young children.

4. Show the ingredients you will use. You may also make a poster or handouts with the ingredients and instructions printed on them.

5. Wash your hands and the cooking utensils to demonstrate good hygiene.

6. Prepare only enough food for two or three children so that the amounts and proportions of ingredients are clearly understood. (If you wish to have many people try the new food, prepare a larger quantity before the demonstration.)

7. Show each step in the preparation; speak loudly and talk about what you are doing - always face your audience!

8. Get the audience involved - they can help prepare ingredients and, of course, they will want to sample the finished food!

9. Ask the group what they liked or disliked about the new food. Will they try it? Why? Why not?

10. Ask those who say they will try the new food to let you know if their children like it. How can they change it to make it better?

SESSION 4: CASE STUDY: VILLAGE WEANING FOOD PROJECTS IN THAILAND

Purpose:

Trainees will review a description of Thailand's village weaning food and nutrition education projects. They will also discuss whether this type of community self-help activity would be appropriate in their regions.

Time: 1 1/2 hours

Materials:

- Flipchart and marking pens
- Handout - "Case Study: Village Weaning Food Projects in Thailand"

Steps:

1. Introduce the session by explaining that villagers can improve weaning practices and child nutrition if they work together. During this session, participants will read a case study about community weaning food projects in Thailand.

2. Distribute the case study, and ask participants to read it silently.

3. Write the discussion questions on the flipchart, and work with participants to answer each of the questions.

   OR

   Divide into small groups, asking the groups to write and present their answers to the discussion questions.

4. Summarize the session by pointing out that projects of this type require:

   - commitment by the village;
   - training for villagers in techniques of food production; nutrition education and financial management;
   - careful selection of grinders and other utensils;
   - quality control and adequate hygiene to make sure that weaning foods are not contaminated;
   - on-going technical advice and assistance.

CASE STUDY: VILLAGE WEANING FOOD PROJECT IN THAILAND

Introduction

Preparation of special foods for children during the weaning period (six months - two years) takes extra time and effort. In many countries, women are responsible for working in the fields, fetching water, collecting firewood, preparing food for the family and caring for small children. They often do not have time to make special meals for their young children.

In this case study, we will learn about several different programs in Thailand that are addressing the problem of malnutrition in weaning-age children. There are over 100 villages in different parts of Thailand with the type of self-help project described below.

Case Study

Thailand is a rural country of over 47 million people. Agriculture is the main source of income in rural villages, and rice is the main crop and the staple of the Thai diet. It is estimated that over two-thirds of Thailand's infants and pre-school children are affected by malnutrition.

Several years ago, a number of organizations in Thailand began working with rural villages to improve the nutrition and health of their children. Most of the villages involved were first visited by motivation teams responsible for promoting cooperative village action. These teams emphasized self-reliance and used games and discussions to learn more about village problems and "felt needs." They also presented information to the villages about appropriate health and nutrition technologies and low cost food production.

As a result of the work of the motivators, many of the villages formed cooperatives or committees responsible for village health and nutrition activities. In most cases, cooperatives collect a small contribution from each cooperative member to start a revolving community health fund for village projects.

Cooperatives select nutrition and health volunteers who receive training from a district health team. Village volunteers then become responsible for monthly weighing of all children under three years old in the village and for nutrition education with mothers and school children. Growth cards are given to all mothers for children under three years old in most of these villages.

Village nutrition cooperatives are also introducing improved weaning foods as well as foods for the treatment of malnourished children. Different mixtures of rice, legumes and seeds or nuts are produced, packaged and distributed by the village cooperatives using local ingredients and appropriate village technology.

Members of the nutrition cooperatives generally take turns preparing the improved weaning foods. The ingredients are first cleaned; then legumes, seeds and nuts are roasted until they are fully cooked. Rice is heated for only a few minutes to kill harmful bacteria. After roasting, the weaning mixtures for young children are ground to a fine flour. For older children, mixtures are ground to a coarse flour, or they are left in their original form. Because the ingredients are roasted, the amount of time required for cooking the weaning mixtures is reduced.

Village nutrition cooperatives use utensils commonly found in the village as well as appropriate, low-cost grinders and roasters to make the improved weaning foods. Several different types of grinder are being used depending on the resources of the program and the availability of electricity. These include the common village grinding stone, the hand grinder and a low-cost electric grinder.

Families with malnourished children are assisted by the village nutrition cooperatives and their weaning food projects. If a child is suffering from severe malnutrition, weaning mixtures are given to the family at no cost. In cases of mild and moderate malnutrition, a reduced price may be charged, or raw foods may be traded for the packaged weaning foods.

The sale of weaning foods to families in their own and other nearby villages is another goal. The prices charged to the families of healthy children vary from village to village. Unfortunately, few villages keep detailed records of their expenses and sales, so it is difficult to know if cooperatives are making a profit from this activity. Income from the sale of weaning foods is reinvested in producing more of the same. Excess profit can be used by the cooperatives for projects they decide to carry out to improve the health of their villages.

Because these village projects are relatively new, it is too early to evaluate their impact. We know that villages have responded enthusiastically to the program and, in several of the first villages to establish health/nutrition cooperatives, there are reports that severe malnutrition has been eliminated.

Questions for Discussion

1. What is the problem the rural villages in Thailand are working together to solve?

2. What have the villagers done to solve this problem? List their activities.

3. What resources did the villagers need to carry out their activities? (Remember resources are people, materials, equipment, interest, money, etc.)

4. Would this type of project be feasible in the communities you work with now? Why or why not?

SESSION 5: WEANING FOODS - VILLAGE PRODUCTION TECHNIQUES

When weaning foods like those described in the Thailand case study are available, women need much less time to prepare frequent, high-quality meals for their weaning-age children. Packaged weaning foods can be distributed or sold at a reduced price for the rehabilitation of malnourished children. They can also be sold by community groups and individuals as an income generating activity.

Purpose:

Trainees are introduced to the technologies and locally developed recipes for village production of weaning foods. They practice making several weaning mixtures, then analyze the production process in terms of village resources and feasibility.

Time: 2 hours

Materials:

- Village-appropriate grinders. Two types of grinders are often required: a corn grinder for coarse grind and a coffee grinder for fine flour grinds.
- Village cooking utensils, including roasting pans, spoons for stirring and measuring, cups, sieve, winnow, charcoal cooker, etc.
- Handout - "How to Make Flour from Cereals, Tubers and Legumes"
- Handout - "Recipes for Village-Processed Weaning Foods"
- Handout - "Planning a Village Weaning Food Project"
- Small plastic bags and a candle for sealing

Prior to the Session:

Investigate the techniques and ingredients that have been or could be used to make mixed cereal and legume flours in your country. A description of the process and recipes developed in Indonesia are included for your information.

Steps:

1. Introduction - Tell trainees that they will practice using equipment and recipes for making packaged weaning foods. The techniques they will use in this session might be used in a village for production of weaning foods for sale or distribuion.

2. Describe the Production Process

a. List the possible ingredients for cereal and legume mixtures that are grown in the trainees' regions.

b. Distribute and review the Handout - "How to Make Flour from Cereals, Tubers and Legumes."

c. Demonstrate the use of roasters and grinders.

3. Practice

a. Divide trainees into work groups. Assign each work group the preparation of one of the ingredients. Prepare sufficient quantities of each flour so that they can be used in several different combinations. Also prepare different consistencies of each ingredient: coarse grind for older children, fine flours for infants, etc.

b. Distribute the Handout - "Recipes for Village-Processed Weaning Foods."

Assign each work group the preparation of one of the recipes. Groups should prepare one portion for sampling and one portion for packaging.

4. Discussion: Discuss the time and labor required to produce the weaning mixtures. Compare the tastes, consistencies, etc. Ask trainees what changes could be made in the process, ingredients, etc. to improve the production and the results. Ask them if, after trying the production of mixed weaning foods themselves, they would recommend this type of village weaning food in their areas.

5. Distribute the Handout - "Planning a Village Weaning Food Project". Review the questions on the handout with participants. Ask them individually or in their work groups to answer each of the questions. Review the results of this exercise in a group discussion.

6. Summary

The process used for weaning food production in this session can be modified to fit local needs and resources.

Projects started in several countries are experimenting with alternative ways of obtaining and processing the necessary raw ingredients for weaning mixtures.

For example:

- Raw ingredients are contributed by families (Indonesia)

- Families bring one or more of the roasted ingredients for grinding. (Nepal)

- Ingredients may be roasted and packaged for grinding later at home by the family. (Thailand)

In these cases, the community project is providing partial production and ingredients; the families are providing the remaining labor and raw ingredients for the weaning mixtures.

The type of project discussed in Sessions 4 and 5 makes a high-quality weaning mixture available to the community. The weaning mixture can be used for treating malnourished children, for making quick meals for weaning age children, and as an ingredient in snacks and meals for older children and adults.

If properly managed, this type of project can be self-sustaining. It may also provide added income for community self-help activities.

Before undertaking a village weaning food project, interested managers and groups should seek advice from local experts.

HOW TO MAKE FLOUR FROM CEREALS, TUBERS AND LEGUMES

Green Gram
(Mung Beans)
↓
Clean
↓
Wash
↓
Dry Roast slowly until cooked
↓
Grind while hot
(coffee grinder)
↓
Sieve
↓
Fine flour

Beans
(Red, White)
↓
Clean
↓
Wash
↓
Dry Roast slowly until cooked
↓
Grind coarse
(corn grinder)
↓
Winnow
↓
Grind fine
(coffee grinder)
↓
Sieve
↓
Fine flour

Maize
(dried, whole kernel)
↓
Clean
↓
Grind coarse
(corn grinder)
↓
Winnow
↓
Grind fine
↓
Sieve
↓
Grind
↓
Sieve
↓
Fine and coarse flour

Sorghum
↓
Clean
↓
Dehusk
↓
Winnow
↓
Grind fine
↓
Sieve
↓
Fine flour

Cassava
(whole)
↓
Peel
↓
Wash
↓
Soak in lime water for about 5 minutes
(2 grs. lime to 1 liter water)
↓
Dry with a clean cloth
↓
Grate with metal grater
↓
Dry about 5 hours in the sun or on a solar dryer
↓
Grind
↓
Sieve
↓
Fine flour

HANDOUT

PLANNING A VILLAGE WEANING FOOD PROJECT

Production of weaning foods for distribution and sale requires special equipment and knowledge of production techniques. The people who will make the weaning mixtures must be trained and supervised. Distribution and sale of the mixtures require careful recordkeeping and financial skills.

Individuals and village groups who are interested in starting weaning food production should consider the following before they begin:

GOALS - What are our goals for this activity?

PRODUCTION - What ingredients will we use?

What equipment will we use? Types of grinders, roasters, etc?

Where will we produce the weaning foods?

Who will produce them?

How will the weaning foods be packaged?

RESOURCES - How will we obtain the raw ingredients?

How will we obtain the equipment and the space we need?

Who will train group members, workers, etc., to make and control the distribution of the weaning foods?

DISTRIBUTION/ SALES - Will the weaning foods be sold?

Will the weaning foods be given free? Under what circumstances?

What records and reports will we need to control inventory and sales?

COMMUNITY - How will we introduce the weaning foods to community members?

How much would most community members be able or willing to pay for the weaning foods?

HANDOUT

RECIPES FOR VILLAGE-PROCESSED WEANING FOODS

Indonesia

	Raw Weight		Local Measure
			Package
Maize flour (fine)	50 grs.	-	1/2 plastic cup (100 ml.)
Green gram flour (fine)	25 grs.	-	2 1/2 tablespoons
Sugar	15 grs.	-	1 tablespoon (15 ml.)
Salt	1 pinch	-	
Coconut oil	5 grs.	-	1 teaspoon (5 ml.)
or Groundnut paste	15 grs.	-	1 tablespoon
Water	400 ml.	-	2 plastic cups (400 ml.)

Cook for about 10 minutes. Makes 1-2 servings. Add 50 grs. (2 handfuls) of finely chopped green leafy vegetables about 5 minutes before porridge is ready.

Indonesia

	Raw Weight		Local Measure
			Package
Maize flour (fine)	50 grs.	-	1/2 plastic cup
Red Bean flour (fine)	25 grs.	-	2 1/2 tablespoons
Sugar	10 grs.	-	1 tablespoon (15 ml.)
Coconut oil	5 grs.	-	1 teaspoon (5 ml.)
Salt	1 pinch	-	
Water	400 ml.	-	2 plastic cups (400 ml.)

Cook 10 minutes. Makes 1-2 servings. Add 50 grs. finely chopped green leafy vegetables.

Nepal

"Sarbottam Pitho" (Super-flour)

Cereal grain	2 kilos (1 kilo of 2 of the following: maize, rice, sorghum, millet)
Legume	1 kilo (soybeans, green gram, beans)

Roast legume and cereal grains together. Grind to fine flour. Makes 3 kilos or 40-50 servings. Cook in boiling water. Add salt, sugar, oil to taste.

Thailand

"Kow Tip"

Rice	3 kilos
Mung Bean	1 kilo
Groundnut	1 kilo
Sugar (optional)	

Roast mung beans and groundnuts for 5-10 minutes. Roast rice for 3-5 minutes. Combine and grind. Makes 50 packages of 100 grams each. Can be cooked as porridge or in cakes for snacks.

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UNIT 5

PREVENTING DIARRHEA

SESSION 1: Preventing Diarrhea

SESSION 2: Diarrhea Home Management

SESSION 3: Community Activities to Prevent Diarrhea

SESSION 1: PREVENTING DIARRHEA*

Diarrhea is the disease that kills more children in the world today than any other. While diarrheal disease control programs often emphasize proper treatment, including Oral Rehydration Therapy (ORT), for the most reduction of deaths from diarrhea among young children individuals, families and communities can take action to prevent diarrhea and to prevent death from diarrhea through a variety of other effective and affordable preventive interventions.

Purpose:

Trainees review the relationship between diarrhea, nutrition and child survival. Rules for the prevention of diarrhea are developed.

Time: 2 1/2 hours

Materials:

- Handout - "How to Prevent Diarrhea"
- Flipchart and marking pens

* Much of the format and materials used in compiling this session was adapted from the WHO Programme for Control of Diarrhoeal Diseases Supervisory Skills Course: Module on Prevention of Diarrhoea, revised ed.

Steps:

1. Diarrhea and malnutrition:
   Begin by reviewing the relationship between diarrhea and malnutrition. (See Unit 1, Nutrition of Women and Children).

   Emphasize the following points:

   - Malnourished children have more severe and more prolonged diarrhea than well nourished children, which results in a cycle of more malnutrition, more days of diarrhea, greater risk of death due to diarrhea, etc.

   - Diarrhea causes malnutrition because food is not absorbed in the intestine; nausea and vomiting may decrease the amount of food eaten. Diarrhea is often related to lack of appetite among young children resulting in decreased food intake. In some cultures, food may also be withheld from a child with diarrhea.

   - To prevent malnutrition we must prevent diarrhea and treat it properly when it occurs.

2. Preventing Diarrhea:

   - Review the fecal-oral transmission of diarrhea through contaminated food, water and hands.
   - Use the handout "How to Prevent Diarrhea" as a guide, review the seven interventions recommended by WHO which have been shown by recent research to be particularly effective and affordable in preventing diarrhea. These are:

     Breastfeeding
     Improved weaning practices
     Use of plenty of clean water
     Handwashing
     Use of latrines
     Proper disposal of babies' stools
     Measles immunization

   - Emphasize the importance of breastfeeding as a means of preventing diarrhea in infants (discuss studies showing large differences in rates of diarrhea among exclusively breastfed infants compared with those not breastfed or receiving both bottle and breast).

3. Ask the group to brainstorm the socioeconomic and environmental causes of diarrhea in young children. These should include:

   - Use of feeding bottles
   - Lack of water for washing
   - Unclean water
   - Lack of latrines
   - Spoiled or contaminated foods

4. Divide into work groups with 5-6 trainees in each. Ask work groups to develop a list of community action for prevention of diarrhea. When they finish, each work group should read its rules to the others.

5. Distribute the handout - "How to Prevent Diarrhea." Review and discuss any rules on the handout that were not mentioned by work groups.

6. Discuss the types of community programs that could help families understand and follow rules for prevention of diarrhea. Some examples are:

   - Latrine construction
   - Family education
   - Water supply improvement
   - Breastfeeding promotion
   - Immunization programs

7. Summary

Point out that all efforts to prevent diarrhea must include strong educational activities because many of the causes of diarrhea are related to behaviors, i.e., personal habits of hygiene, food preparation, etc. In many instances, the role of the health worker is to help community members to adopt and maintain the recommended practices. In other cases, outside resources and assistance may also be necessary before people are able to practice good personal and environmental hygiene, i.e., materials for latrine construction or water projects.

HANDOUT - HOW TO PREVENT DIARRHEA*

BREASTFEEDING

Breastfeeding is declining in most developing countries, especially among the more educated and more urbanized groups. Reasons for this decline may include a belief that bottle feeding is more modern, advertisement of infant formula, difficulty in breastfeeding while at work, fear of becoming less sexually attractive, and belief that one cannot breastfeed adequately.

During the first 4-6 months of life, infants should be exclusively breastfed. This means the baby should receive breastmilk and no other fluids such as water, juice or formula.

Exclusively breastfed babies are much less likely to get diarrhea than babies who are not breastfed or are partially breastfed. If an exclusively breastfed baby does get diarrhea, the baby is much less likely to die. During the first 6 months of life, the risk of having severe or fatal diarrhea is 30 times greater for infants who are not breastfed than for infants who are exclusively breastfed.

During age six months to two years, infants should be partially breastfed. This means that breastfeeding should continue after weaning foods are introduced. Babies who continue to get breastmilk will get less diarrhea than those who do not. This partial breastfeeding will greatly reduce the risk of severe diarrhea and diarrhea death.

Breastfeeding protects because it avoids use of contaminated bottles, teats and formula. The content of breastmilk also helps the baby's body build resistance to diseases. Therefore, even if bottles are clean and formula is properly prepared, a bottle-fed child is at increased risk of disease.

What Mothers Should Do

Breastfeed their babies exclusively for the first 4-6 months, and partially up to age two or more.

To breastfeed comfortably and safely,
- to decrease risk of infection, give no extra fluids such as water, sugar water, or milk formula, especially during the first days of life
- start breastfeeding as soon as possible after delivery
- breastfeed on demand (increased sucking increases milk supply)
- if it is not possible to take the baby to work, breastfeed before leaving home, on returning, at night, and at any other time when with the baby
- express milk manually to avoid engorgement during periods of separation from the baby

Breastfeed during and after illness of their babies, especially diarrhea.

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*Adapted form WHO Supervisory Skills Module "Prevention of Diarrhea, revised edition 1987.

IMPROVED WEANING PRACTICES

Weaning is the process by which the infant gradually becomes accustomed to the adult diet. The child's diet changes from milk alone to one based on the regular family meals. Milk, preferably breastmilk, continues to be an important part of the diet.

Weaning is a hazardous period for infants. Poor weaning practices are associated with increased risk of diarrhea and diarrhea death. Good weaning practice involves attention to the when, the what and the how.

What Families Should Do

When to begin to Wean?

When the child is about 4-6 months old, continue to breastfeed regularly and introduce a few soft, mashed foods, twice per day. When the child is about six months old, continue to breastfeed but expand the variety of foods and give them 4 times per day. From one year of age, continue to breastfeed as desired and give all foods, suitably prepared, 4 to 6 times per day.

How?

- Wash hands before preparing weaning food and before feeding the baby.
- Prepare food in a clean place.
- Wash uncooked food well when preparing it.
- Cook or boil food when preparing it.
- If possible prepare weaning foods immediately before they will be eaten.
- Cover foods which are being kept. Keep foods in a cool place. Refrigerate if possible.
- If cooked food is prepared more than 2 hours in advance, heat it to a boil before feeding it to the baby.
- Feed the baby with a clean spoon. (Do not use a bottle).

MEASLES IMMUNIZATION

In preventing measles, measles immunization also prevents the diarrhea that often accompanies or follows it. Diarrhea which is associated with measles is particularly severe, is often dysentery, and is more likely to lead to death than most diarrhea in children. **Up to 10% of children with measles and diarrhea die.**

What Families Should Do

Immunize children against measles as soon as possible following the approved national vaccination schedule.

USE OF PLENTY OF CLEAN WATER

Using plenty of clean water helps protect families from diarrhea. Families that have good access to a reliable supply of clean water have less diarrhea than less fortunate families. In general, families cannot make major changes in the availability of a good water supply. Improvements in water supply usually come about through government-assisted projects, in which families and communities may play an important role. Families may also be able to improve their facilities for collecting and storing rainwater. Families can reduce their risk of diarrhea by using the cleanest available water and protecting it from contamination, at the source and in the home.

What Families Should Do

Collect water from the cleanest available water source.

Protect water sources by keeping animals away, by locating latrines more than 10 meters away and downhill, and by digging drainage ditches uphill from the source to channel storm water away from it.

Collect and store water in clean containers. Empty and rinse out containers daily. Keep the storage container covered and do not allow children or animals to drink from it. Allow no one, especially a child, to put his hands into the storage container. Obtain water with a long-handled dipper which is kept specially for that purpose.

Boil water used from making food or drinks for young children. Boil other drinking water if sufficient fuel is available. Water needs only to be brought just to a boil. (Vigorous boiling wastes fuel and is unnecessary.)

HANDWASHING

Parents can help protect young children against diarrhea by adopting certain hygiene practices. These practices may differ from one culture to another. One very important practice is handwashing.

Good handwashing means use of soap (or a local substitute), use of plenty of water, and careful cleaning of all parts of the hands. If water is scarce, it may be used more than once to wash hands and utensils. It can then be used to wash the food or to irrigate the vegetable garden.

What Families Should Do

All family members should wash their hands well

- after cleaning a child who has defecated, and after disposing of a child's stool
- after defecation
- before preparing food
- before eating
- before feeding a child

An adult or older sibling should wash the hands of young children.

USE OF LATRINES

Diarrheal diseases are spread by the stools of infected persons. Disposing of stools more safely reduces the diarrhea transmission. In some countries, latrine use reduces the risk of diarrhea even more than improving water supplies.

All families should have and use a clean and functioning latrine. Families who do not have a latrine should build one, following a design recommended by the relevant government agency. (Two practical designs are in Annexes A and B). When there is no latrine, families should defecate as hygienically as possible. Consideration should be shown by not defecating uphill or upstream from other people or villages.

What Families Should Do

Have a clean functioning latrine that is used by all members of the family old enough to do so. Keep the latrine clean by regularly washing down dirty surfaces.

If there is no latrine
- defecate away from the house, paths, or anywhere that children play, and at least 10 meters from the water supply
- avoid going barefoot to defecate
- do not allow a child to visit the defecation ground alone

PROPER DISPOSAL OF BABIES' STOOLS

Hygienic disposal of the stools of young children is important everywhere. In some communities, the stools of infants and young children are considered harmless. However, these stools are dangerous because they transmit diseases to the children and parents. They should be disposed of quickly and hygienically.

What Families Should Do

Quickly collect the stool of a young child or baby, wrapping it in a leaf or newspaper and putting it into a latrine.

Help young children to defecate into an easily cleaned container, such as a potty. Immediately put the stool in a latrine and wash out the container. Alternatively, have the child defecate onto a disposable surface, such as a newspaper or a large leaf. Wrap up the stool and put it into a latrine. If there is no latrine, select a place to dispose of children's stools, such as in a hole or in one corner of the yard.

Promptly clean a child who has defecated. Then wash your hands and the child's hands.

SESSION 2: DIARRHEA HOME MANAGEMENT

Purpose:

Trainees discuss the treatment of diarrhea following the WHO rules for treating diarrhea at home. They practice making two common types of oral rehydration fluids, a prepackaged mixture and a salt-sugar solution, the latrine using local measurements and common household utensils. Trainees are taught to recognize the signs and symptoms of dehydration and encouraged to refer dehydrated children to trained health workers for treatment.

Time: 2 hours

Materials:

- Handouts - "Three Rules for Treating Diarrhea at Home"
  - "How to Make ORS and SSS Oral Rehydration Fluids"
  - "How to Recognize Dehydration"
- Prepackaged ORS (available from UNICEF)
- ORT measuring spoons (available from TALC, P.O. Box 49, St. Albany, AL14AX, London, England)
- Slides or pictures showing signs of dehydration
- Sugar, salt, boiled water, cups, spoons and liter containers
- Flipcharts and marking pens

Steps:

1. Read the story below to the group.

"The mother notices that her child has had watery stool, not an uncommon occurrence for children in any part of the world. A touch of diarrhea. It will go away, she thinks. Likely it is something bad passing out of his system. The day goes on and the diarrhea continues. The child becomes restless. His skin loses elasticity. His mouth becomes dry and red. The mother is afraid to feed him and give him liquids, thinking that she will only encourage the diarrhea.

Hours pass and the child's condition worsens. He is now semi-conscious and has cold skin, a weak pulse and little urine flow. Terrified, the mother calls for help from the village health worker. She is told that the child is severely dehydrated and in danger of death. He must have intravenous therapy immediately, but there is no apparatus available in the village. The child will probably die."

Salubritas, Volume 3, Number 1
January 1979

2. To start the discussion, ask trainees. "What happened in this story? How could the child's life have been saved?"

3. Make the following points:

   - A young child can die from severe diarrhea in as few as six hours.
   - Dehydration is the cause of death from diarrhea. Dehydration is caused by the loss of water and important salts from the body in stool.
   - Until a few years ago, the only way to treat dehydration was to inject rehydration fluid into the body through a vein. This requires special, sterile apparatus and a health worker trained to administer the I.V. solution.
   - In the late 1950's, a health technology was developed whereby rehydration fluids could be administered orally for the prevention or treatment of dehydration due to diarrhea. This **Oral Rehydration Therapy (ORT)** has made it possible for families and health workers to prevent dehydration from diarrhea in the home. In a hospital or clinic, it provides the trained health worker with a low cost alternative for the treatment of dehydration.
   - Most diarrheas are self limiting, i.e., if dehydration can be prevented or controlled, the diarrhea itself will disappear in a few days.

4. Definitions - Before attempting to discuss the more technical aspects of Oral Rehydration Therapy in depth, present the following definitions to the group to avoid confusion during the discussion to follow:

   * Oral Rehydration Therapy (ORT)
   The giving of fluids by the mouth to prevent or treat dehydration.

   * Oral Rehydration Salts (ORS)
   Although formerly used to abbreviate Oral Rehydration Solution, for the purpose of containing sodium chloride, potassium chloride, trisodium citrate (or in older preparations, sodium bicarbonate) and glucose. ORS is only one type of oral rehydration fluid and is the treatment of choice for dehydration due to diarrhea. It may also be used at home to prevent dehydration.

   * Salt-Sugar Solution (SSS)
   Again, only one type of home available oral rehydration fluid. This fluid is a simple mixture containing only sugar, salt and water.

* Home-available solutions
Refers to a variety of oral rehydration fluids, including sugar-salt and other food-based solutions that can be mixed with common household ingredients.

* Oral Therapy for Diarrhea
ORT plus feeding.

5. Review the handout "Three Rules for Treating Diarrhea at Home". Point out that the purpose of this training is to learn how to manage diarrhea at home and that dehydrated children should be referred to a trained health provider for treatment. Mention that more detail on how to recognize dehydration will be given later in the session.

6. Selecting an Oral Rehydration Fluid.

   There are a variety of oral rehydration fluids suitable for home management of diarrhea, including food-based fluids, salt-sugar solutions (SSS) and oral rehydration salts (ORS) solution. It is now understood that early administration of fluids such as rice, water, or cereal gruel at the first sign of loose stools can help prevent dehydration. This can be particularly important when pre-packaged ORS solutions are not available. However while some fluids found in the home are helpful, some are potentially dangerous, such as soft drinks, highly sugared teas and very salty soup. Therefore, diarrheal disease control programs should try to identify the particular fluid likely to be available in the home and to advocate it specifically. Generally, recommended fluids should contain some salt and sugar or starch and should meet the following criteria. **(Write on flip chart)**

   o safe and effective in preventing dehydration
   o locally available and affordable
   o culturally acceptable
   o easily prepared
   o one that mothers are likely to use when needed

   Many diarrheal disease control programs currently advocate the use of a salt-sugar (SSS) in the home. However, research has shown that serious errors in measuring both salt and sugar occur all too frequently. It is therefore extremely important to stress the necessity for accuracy in measurement when teaching this technique. Further, it is important that programs to train people in the use of this technique incorporate a follow up component to monitor the continued accuracy of fluid preparation.

In many areas, policy decisions have been made as to which fluid mixture or mixtures should be used. Trainees should be encouraged to find out what, if any, decisions have been made in their own areas, and encouraged to follow the approved policy, including instructions for measuring and mixing ingredients.

7. Distribute the Handout - "How to Make ORS and SSS Oral Rehydration Fluid." The Handout shows two different techniques for making oral rehydration fluid using: 1) a pre-packaged mix, and 2) a mix made with sugar, salt and water. Recipes for the simple sugar, salt and water mix are shown as they might be adapted using local measurements and common household utensils. Review the Handout, then demonstrate preparation of each recipe. Or distribute containers and utensils and ask work groups (5-6 persons) to practice making each of the recipes.

8. Ask trainees to list the advantages and disadvantages of pre-packaged and home available fluid mixtures when they are used in the home to prevent dehydration due to diarrhea. They may include:

   a) Pre-packaged mix

      Advantages - Ease of preparation; standardized amounts of each ingredient; low potential for mixing errors; only need to measure water; may better fulfill desire of mothers to use medicine when their child is ill; the education message is simpler and easier to get across.

      Disadvantages - Usually imported or made nationally; expensive to distribute; difficult to distribute; taste of solution may not appeal to the non-dehydrated child; mothers may not be motivated to go out and to get packages for mild cases of diarrhea; creates dependence on product which may not always be available.

   b) Home available fluids with common measure and containers:

      Advantages - Ingredients are available in all homes; lower cost; good for early treatment of diarrhea.

      Disadvantages - Must decide which mixture to use; more difficult to get across the educational message; more difficult mixing; measurements are not standardized so amounts of ingredients may vary from solution to solution; lack of "glamour" (not really "medicine").

Make the point that for either method, availability of clean water and variability in the sizes of containers and measuring tools present problems. Emphasize the negative effects that too much salt or too much sugar can have.

9. Describe how to give oral rehydration fluid using a cup and spoon. It is important to continue giving fluid even if vomiting occurs. In cases of vomiting, wait 10 minutes, then continue giving the solution but more slowly.

Write the following general rule on the flipchart:

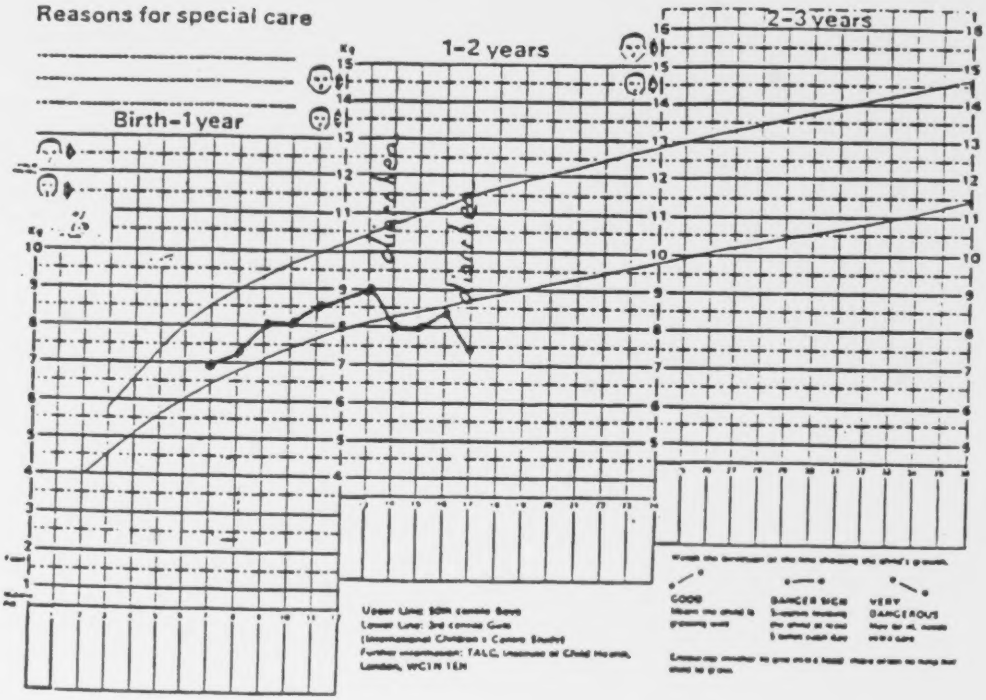
Rule: Begin giving oral rehydration fluid after the first loose stool.

10. Explain that young children, who usually have many short periods of diarrhea each year, must be fed during the diarrhea, or they will become malnourished and more likely to get severe diarrhea again and again. Even though the food that a child eats when he has diarrhea will not be completely digested, some of the food is absorbed and used by the body. Mothers should be encouraged to begin feeding soft foods to their children as soon as they are able (willing) to eat. Since a mother will only know if the child is willing to eat if he accepts food, the mother should continue to offer small amounts of different kinds of food. Once the child shows a willingness to eat, it is important to offer foods that are easily digestible and to encourage the child to eat foods high in calories and energy density. Good foods, depending on the age of the child, are mixes of cereals and beans or mixes of cereals and meat or fish. It is good to add oils to these foods to increase the energy content. It is also good to encourage potassium rich foods such as fresh fruit juices and bananas. CAUTION: artificially sweetened juices contain too much sugar.

11. **Rule: Breastfeeding should be continued during diarrhea.**

Most children will continue to breastfeed and may even suckle during diarrhea. Continued breastfeeding may be the most important step taken to prevent malnutrition. Breastfeeding should be encouraged for the sick child.

12. Show the growth chart of a child with diarrhea.
Example:



The chart demonstrates weight loss during diarrhea. To recover the lost weight and to remain well nourished, a child should be fed extra food (ex., one extra meal) each day for 5-7 days after the diarrhea has stopped. We call this "catch-up" feeding.

Rule: Feed extra food every day for 5-7 days after the diarrhea stops.

13. Distribute the Handout "How to Recognize Dehydration". Use the Handout plus slides or pictures to discuss the signs and severity of dehydration.

- Make the following points:

* While preventions of dehydration due to diarrhea can be accomplished in the home, treatment of children that are already dehydrated should be done by a trained health provider.

* Filed research indicated that a significant proportion of diarrheal disease episodes and deaths due to diarrhea are the result of dysentery. Although dysentery treatment should include the administration of fluids and feeding, these therapies are not sufficient.

* Referral to a trained health provider is particularly important if there is blood in the stool, if there is a high fever (38.5 C or 101 F), if the child is undernourished or shows signs of dehydration or if the diarrhea worsens or does not get better.

14. Summary

Review the Handout "Three Rules for Treating Diarrhea at Home" with the trainees. Finish by discussing the "danger signs" of diarrhea. When these signs are present, it means that a health worker should be called.

HANDOUT

THREE RULES FOR TREATING DIARRHEA AT HOME*

To treat a child with diarrhea who has no signs of dehydration, the mother should give the child **FLUIDS** and **FOOD** in normal and generous amounts and watch carefully to see if the child becomes worse.

EXPLAIN THE THREE RULES FOR TREATING DIARRHEA AT HOME

1. GIVE YOUR CHILD MORE FLUIDS THAN USUAL TO PREVENT DEHYDRATION. RECOMMENDED FLUIDS INCLUDE:

- Food based fluids, such as gruel, soup or rice water.
- Breastmilk or milk feeds prepared with twice the usual amount of water.

If you do not have a recommended food-based fluid, you can give a specially prepared salt and sugar solution.

2. GIVE YOUR CHILD FOOD

- Give freshly prepared foods. Recommended foods are mixes of cereal and beans, or cereal and meat or fish. Add a few drops of oil to the food, if possible.
- Give fresh fruit juices or bananas to provide potassium.
- Offer food every 3 or 4 hours (6 times a day) or more often for very young children.
- Encourage the child to eat as much as he wants.
- Cook or mash or grind food well so it will be easier to digest.
- After the diarrhea stops, give one extra meal each day for a week, or until the child has regained normal weight.

3. TAKE YOUR CHILD TO THE HEALTH WORKER IF THE CHILD:

- passes many stools
- has unusual thirst
- has sunken eyes

→ These three signs suggest your child is dehydrated.

- has a high fever
- does not eat or drink normally
- seems not to be getting better

*From Treatment of Diarrhea Module, WHO Supervisory Skills Course, 1987 Field Test.

HANDOUT

How to Make ORS and SSS Oral Rehydration Fluids

A variety of oral rehydration fluids suitable for home management of diarrhea, including food-based, salt-sugar solution (SSS) and oral rehydration salts (ORS) have been developed. In countries where national policy decisions have been made, it is best to follow the approved policies, including instructions for measuring and mixing ingredients.

1. Pre-Packaged ORS Mixes

Packets or oral rehydration salts are often available through clinics, health workers and pharmacies. UNICEF is the major distributor of ORS packets; however, many governments are now packaging ORS locally for distribution in their countries.

ORS packets usually contain:

Glucose	20 grams	This is added to 1 liter of clean water
Sodium Chloride	3.5 grams	
Trisodium Citrate	2.9 grams	
Potassium Chloride	1.5 grams	

2. Village or Home-Made Sugar, Salt and Water Solution

A simple SSS can be made using ingredients found in most homes and villages. This solution contains:

	For 1 liter	For 1 glass (250 ml)
Sugar**	40 grams	10 grams
Salt	3.5 grams	1 gram
Water	1 liter	250 mls

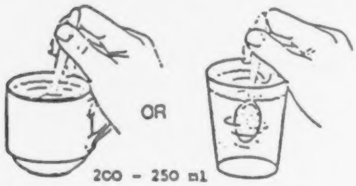
This basic information must be adapted to measurements and containers common to health workers and families in your region. Several examples are shown on the next page:

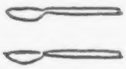
* Some older ORS preparations used sodium bicarbonate 2.5 grams/liter.

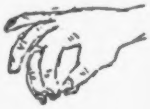
* In most places household sugar is sucrose and the proper amount is 40 grams. However, in some places household sugar is glucose and the proper amount would then be 20 grams.

For one glass of ORS:

In one glass of water	put	2 level teaspoons sugar	and	a 3-finger pinch of salt (1 gr.)

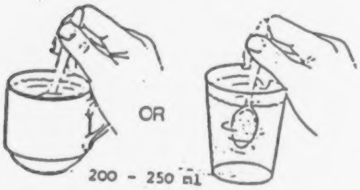

OR
200 - 250 ml

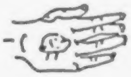


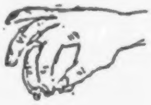


Or, where people traditionally measure with their fingers:

In one glass of water	put	enough sugar to fill the hollow of the hand	and	a 3-finger pinch of salt

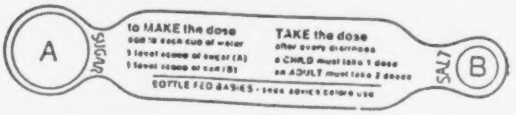

OR
200 - 250 ml

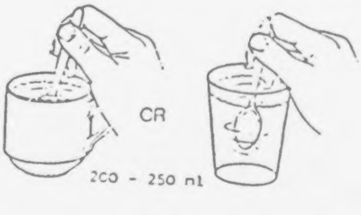




TALC - Teachings Aids at Low Cost has developed a special measuring spoon for making ORS in a cup of water. The spoon, which gives instructions for making and giving ORS, is shown below and can be ordered from TALC.

The spoon may be used by health workers to develop a local recipe for ORS. Use the TALC spoon to find local utensils (spoons, hand measures) that give the same amounts of salt and sugar as the spoon.


A
SUGAR
to MAKE the dose
add to each cup of water
1 level scoop of sugar (A)
1 level scoop of salt (B)
TAKE the dose
after every diarrhoea
a CHILD must take 1 dose
an ADULT must take 2 doses
BOTTLE FED BABIES - seek advice before use
SALT
B


OR
200 - 250 ml

I-5,10

- **Important:** Adding too much salt or sugar can be very dangerous. Be sure to measure all ingredients accurately.

- Water used in ORS solutions should be as clean as possible; however, the need for liquid in a dehydrated child is so urgent that there may not be time to boil and cool the water. Use the cleanest water available for the first fluid given, then boil some water and store it to make the next solution.

How to Give Oral Rehydration Fluid

- Begin giving oral rehydration fluid and other liquids when the diarrhea starts.

- The amount of fluid given depends on the size of the child:
  - 1/4 - 1/2 large cup after each stool for children under two years.
  - 1/2 - 1 large cup for older children

- Give fluid in a cup to older children, or with a cup and a spoon to infants.

- Give fluid slowly - two or three spoonfuls at a time - to avoid vomiting. Continue to give fluid even if the child vomits - some of the solution will stay with him.

- Mix a new batch of oral rehydration fluid every day.

- Continue giving oral rehydration fluid and other liquids until the diarrhea stops.

HANDOUT

Reference: AHRTAG
Issue No. 2
Diarrhoea Dialogue

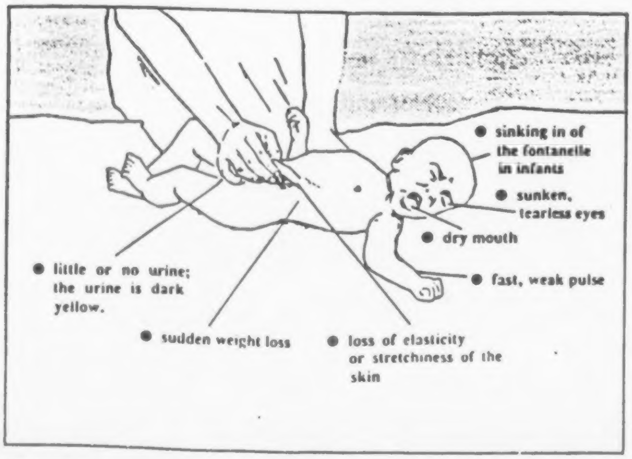
Practical advice series

How to recognize dehydration

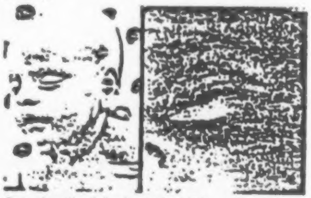
Diarrhoea kills because it causes dehydration. The stools of a healthy child contain relatively little water but a child with diarrhoea passes very watery stools which also contain vital salts (sodium, sodium chloride, potassium and bicarbonate). If the losses are great, both the water and the salts must be replaced or the child will die. To recognize the signs of dehydration it is necessary to ask, look, feel and, if possible, weigh the child.

Important signs and symptoms

- **Stools** Ask about the number and size of the diarrhoea stools. Has there also been vomiting? These answers may also give clues to the severity of dehydration.
- **Thirst** This may be the earliest sign of dehydration. Until a child has lost more than five per cent of his body weight, dehydration causes few signs. When severely dehydrated, a child may not be fully conscious and may be unable to drink.
- **Urine** A healthy child usually passes urine about every three hours. The body of a dehydrated child tries to save water and only produces a small amount of dark coloured urine. Mothers usually know how much urine their children have passed, so ask them if there has been less that usual.
- **Condition** If there is no dehydration, a child will appear alert and well. At a later stage, he will be weak, irritable and may look unwell or sleepy. A severely dehydrated child may appear very sleepy or be unconscious. He may also have fits or convulsions.
- **Sunken eyes** A child's eyes lie in soft, wet, fatty tissue. If he becomes dehydrated, this tissue shrinks and becomes drier and his eyes sink back into his skull. His eyes also lose their shining appearance and stay half open when he is asleep.
- **Dry mouth** A dehydrated child cannot make enough saliva and so his mouth and tongue become dry. This is an important sign.
- **Breathing** Sometimes, a severely dehydrated child breathes fast and deeply. This kind of breathing occurs when a child has been dehydrated for some days or has been rehydrated with the wrong fluids. Do not mistake this deep, fast breathing for the shallow, rapid breathing of pneumonia.


● sinking in of the fontanelle in infants
● sunken, tearless eyes
● dry mouth
● fast, weak pulse
● little or no urine; the urine is dark yellow.
● sudden weight loss
● loss of elasticity or stretchiness of the skin

- **Loss of skin elasticity** The skin of a healthy child is elastic. If you pinch the skin of the abdomen and then let go, the skin quickly flattens again. Dehydration makes a child's skin dry and less elastic so when pinched it sticks up for some seconds before going flat again. If a child is very thin or very fat, loss of skin elasticity is not easy to detect and therefore not a helpful sign in diagnosing dehydration.
- **Pulse** Dehydration makes a child's pulse faster and weaker. When he becomes severely dehydrated, it may not be possible to feel the pulse at the wrist, you may have to feel at the groin or listen to the heart. (With very severe dehydration, the pulse is sometimes slow).



A seriously dehydrated child.
Photograph courtesy of TALC

- **Sunken fontanelle** The fontanelle is the soft place between the bones at the top of a baby's skull. It is large when he is born but closes over by the time he is about 18 months old. When a baby becomes dehydrated, his brain and tissues in the skull lose water and shrink. The fontanelle sinks down between the bones of the skull.
- **Loss of weight** This may occur quickly during a few hours or over several days. A severely dehydrated child may have lost a tenth or more of his normal body weight. If he weighed ten kilograms before the onset of diarrhoea, he may have lost at least a kilo of water and may now weigh only nine kilograms. Loss of weight due to malnutrition occurs more slowly over several weeks or months.

Conclusion

Dehydrated children need urgent rehydration and should be encouraged to drink even if vomiting occurs. Those with severe dehydration and complications such as convulsions should be given oral rehydration fluid and taken to a centre where they can receive special care.

6 Diarrhoea Dialogue, issue 2, August 1980. Produced quarterly by AHRTAG at 85 Marylebone High Street, London W1M 3DE.

SESSION 3: COMMUNITY ACTIVITIES TO PREVENT DIARRHEA*

Purpose:

In this session trainees will learn how to assess a community's current practices with regard to diarrhea, how to use assessment information to prioritize specific preventive practices to emphasize in their particular area using the WHO recommended step-by-step approach and discuss ways that health workers can support selected preventive practices at the community level.

Time: 3 hours

Materials:

- Handout - "About Prevention of Diarrhea"
- Flipchart and marking pens

Steps:

1. Write on the flipchart:

   * The best ways to prevent diarrhea are:
   Breastfeeding
   Improved Weaning Practices
   Use of Plenty of Clean Water
   Handwashing
   Use of Latrines
   Proper Disposal of Babies' Stools
   Measles Immunization

   * Much of the format and material used to compile this session were adapted from the WHO Programme for Control of Diarrhoeal Diseases Supervisory Skills Course: Module on Prevention of Diarrhoea, and Community Involvement, revised ed.

   Briefly review the methods for preventing diarrhea which have already been treated in some detail in Session 1 of the module. Make the point that each one of these methods represents an area which can be addressed through community action in a comprehensive program to control diarrheal diseases.

2. Assessing Community Practices

   The first step in designing community interventions to address diarrheal diseases is to learn about the community's current practices regarding diarrhea and the reasons for them. This information will provide guidance to further actions by helping you to select which interventions are most needed and which are most likely to be successful in a particular setting.

Trainer: Take a few minutes to solicit suggestions from the group about various ways that this type of information can be obtained and write them on newsprint. The finished list should include:

Observation
Home Visits
Interviews
Key Informants

Five types of information on community practices should be obtained about each of the seven ways to prevent diarrhea listed above.

Write on newsprint:

- The extent to which the community engages in the preventive practice
- What community members do instead of or in addition to the preventive practices
- Reasons community members continue their current practices, as well as barriers and constraints to change
- Latrines: their number, type and cleanliness
- Water sources: their quality, convenience and quantity of supply

3. Selecting Preventive Emphasis

Once information has been obtained regarding the community's current practices, the next step is to select one or more preventive practices to emphasize in your particular area. The WHO recommends a step-by-step approach to selecting preventive emphasis.

Write on each newsprint:

Step 1: List the practices that need to be improved in your area

Point out that this includes:

- People who are not doing the preventive practices
- People doing other practices that are harmful

Step 2: Select the more important practices to improve

Trainer: Brainstorm with the large group a list of ways to prioritize practices as feasible. The list should include:

- Whether or not the government already considers the practice a priority

- What the expected effect of the change will be on the diarrhea rates

- How many people, particularly young children, will be affected

Make the point that overall, the most important practices are those which, if changed, would result in the greatest health improvement for the community.

Step 3: From the more important practices, identify some that will be more feasible to change

Trainer: Brainstorm with the large group a list of ways to prioritize practices as feasible. This list should include:

- Will community members understand and believe the benefits of the new practice or the harm in continuing the current practices?
- Do community members have the necessary resources, or can they be obtained?
- Will community members be willing to do the practice, and not feel that it is against tradition, too difficult, too expensive, or too time consuming?
- Can health workers correctly teach the new practice with little or no training themselves?

Point out that if the answer to all of these questions is yes, the change is more likely to be feasible. If the answer to any questions is no, it is unlikely that an effort to change the practice or introduce a new one will be successful, especially without a large commitment of resources.

Step 4: Select preventive practices to emphasize in your area

Having discussed each practice on both the aspect of importance (i.e. government plans, expected effect on disease rate and number of people affected) and feasibility (i.e. community interest, resource availability and health manpower capability), select one or two practices to emphasize in your area.

4. Undertaking Specific Activities

Health and extension workers can play important roles in bringing about improvements in community health. In the prevention and control of diarrheal disease the following activities are recommended:

(Write each activity on newsprint)

1. **Health and extension workers can use food counseling techniques.**

   Point out that messages should be brief and clearly relevant to the person or group being addressed. Only a few messages should be given at a time. If too many messages are given, none are likely to be remembered, but the right message at the right time will make an impression.

2. **Health and extension workers can set good examples**

   What a person does always sends a more powerful message than what a person says.

3. **Health and extension workers can participate in community projects to improve preventive practices.**

Trainer: Brainstorm with the large group to solicit ideas for community projects that could improve preventive practices and that could be accomplished with limited community resources. Some examples are:

- Buying soap cooperatively
- Improving water sources
- Designating and supporting a tradesman to build family latrines
- Having a breastfeeding support group
- Gardening for improved weaning foods

4. **Health and extension workers can support breastfeeding**

   Opportunities to support breastfeeding can be found particularly when the health worker attends births, prescribes drugs or when mothers are having difficulties with breastfeeding and seek out the health worker for advice.

5. **Health and extension workers can build and maintain latrines where they work**

   A clean, functioning latrine can be an example to others in the community. It should be properly maintained so that people can see how a latrine works.

6. **Health and extension workers can advise community members of the cleaner water sources and ways to improve water sources**

   When the assessments of community practices were done, the cleaner water sources were identified so it should be possible to advise community members about the best water sources. Probably, some water sources can be improved by taking simple measures.

Trainer: Brainstorm with the large group to develop a list of simple improvements that can be made to existing water sources. Include:

- Build a fence or wall around the water source to keep animals away
- Dig drainage ditches from an open well to prevent storm water from flowing into it
- Do not allow washing in the water source
- Do not allow children to play in or around the water source
- Do not locate the latrines uphill or within 10 meters of the water source
- Do not defecate within 10 meters of the water source
- Install a simple pulley device and bucket to make it easier to raise from a well

Summary: Distribute the Handout "About Prevention of Diarrhea". Review the Handout reinforcing the main points and answering any remaining questions.

ABOUT PREVENTION OF DIARRHEA*

- The best ways to prevent diarrhea are:

  Breastfeeding
  Improved Weaning Practices
  Use of Plenty of Clean Water
  Handwashing
  Use of Latrines
  Proper Disposal of Babies' Stools
  Measles Immunization

- It is important to assess a community's current practices related to diarrhea and the reasons for them to know what preventive interventions are needed.

- Use of step-by-step approach to select the specific preventive practices to emphasize in a health area. Briefly, the steps include:

  - List the practices that need to be improved in the area.
  - Select the more important practices to improve.
  - Identify the practices that will be more feasible to change.
  - Select one or two preventive practices to emphasize.

- Health services should play an important role in bringing about improvements in a community's practices. Some activities that health workers can do to support selected preventive practices include:

  - Use of good counseling techniques
  - Set a good example
  - Participate in community projects to improve preventive practices
  - Support breastfeeding
  - Build and maintain a latrine at the health facility
  - Advise community members of the cleaner water sources and ways to improve water sources

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* From WHO Supervisory Skills Course: Module on Prevention of Diarrhea.

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World Health Organization. A Decision Process for Establishing Policy on Fluids for Home Therapy of Diarrhoea. WHO/CDD/SER/87.10. Geneva, Switzerland, 1987.

There are two newsletters which contain current information on diarrhea and other related topics that are available to Third World subscribers:

"Dialogue on Diarrhoea". AHRTAG, 85 Marylebone High Street, London, WIM3DE, United Kingdom.

"Mothers and Children". American Public Health Association, Clearinghouse on Infant Feeding and Maternal Nutrition, 1015 Fifteenth Street, Washington, D.C., 20005.

UNIT 6

IMMUNIZATION

SESSION: Improving Immunization Coverage - The Community's Role

SESSION: IMPROVING IMMUNIZATION COVERAGE - THE COMMUNITY'S ROLE

Measles, whooping cough (pertussis) and tuberculosis are diseases that can have an extremely negative effect on the nutrition status and the survival of young children. These illnesses, together with diphtheria, tetanus and polio, are preventable through immunization. Most countries have started national programs that aim to achieve immunization of all children under five years old against these diseases. Because it is difficult to obtain, transport and store the vaccines, immunization programs are usually managed by regional or district health officers. Communities can make sure that all of their young children are immunized by:

- Contacting the national immunization program or the nearest health office and requesting that vaccinators visit their communities regularly.

- Promoting immunization and organizing immunization sessions in the community.

- Identifying and referring all children with incomplete immunization coverage to the vaccination team.

Purpose:

Trainees discuss the national guidelines for immunization of women and young children and learn to identify children with incomplete immunization coverage. The steps a community might take to organize immunization sessions are detailed.

Time: 2 hours

Materials:

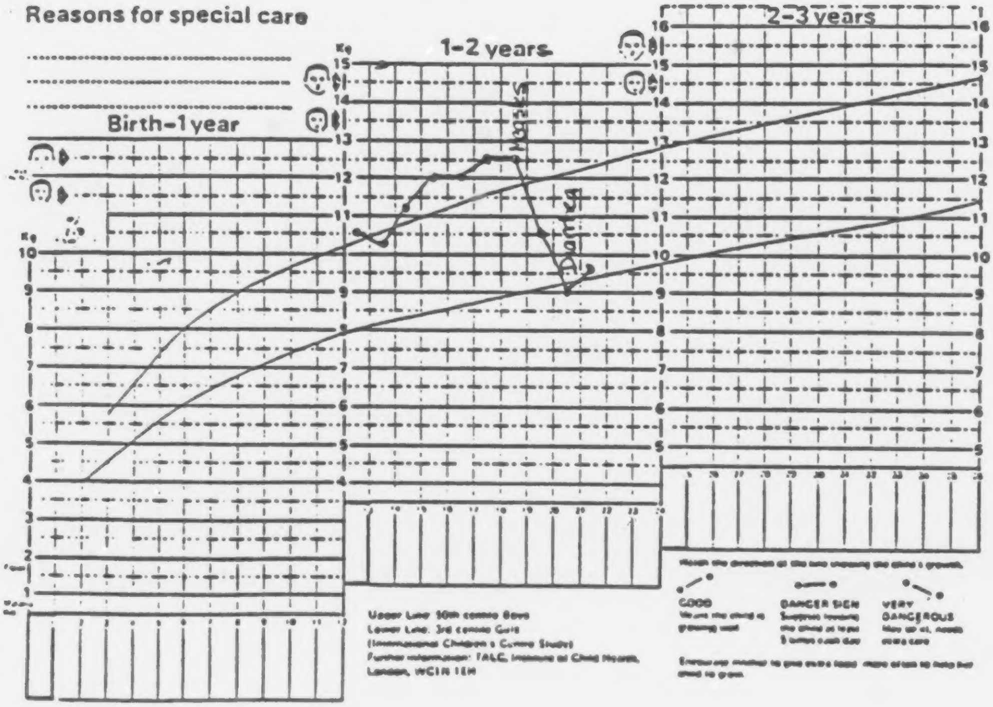
- Handouts -
  - Immunization Overview
  - Understanding the Target Diseases
  - Sample Immunization Schedules
  - Immunization Problems: Missed Dates, Reactions and Sick Children
- Exercise: "Identifying Children Who Need Immunization"
- Educational materials available to trainees for promotion of immunization

Steps:

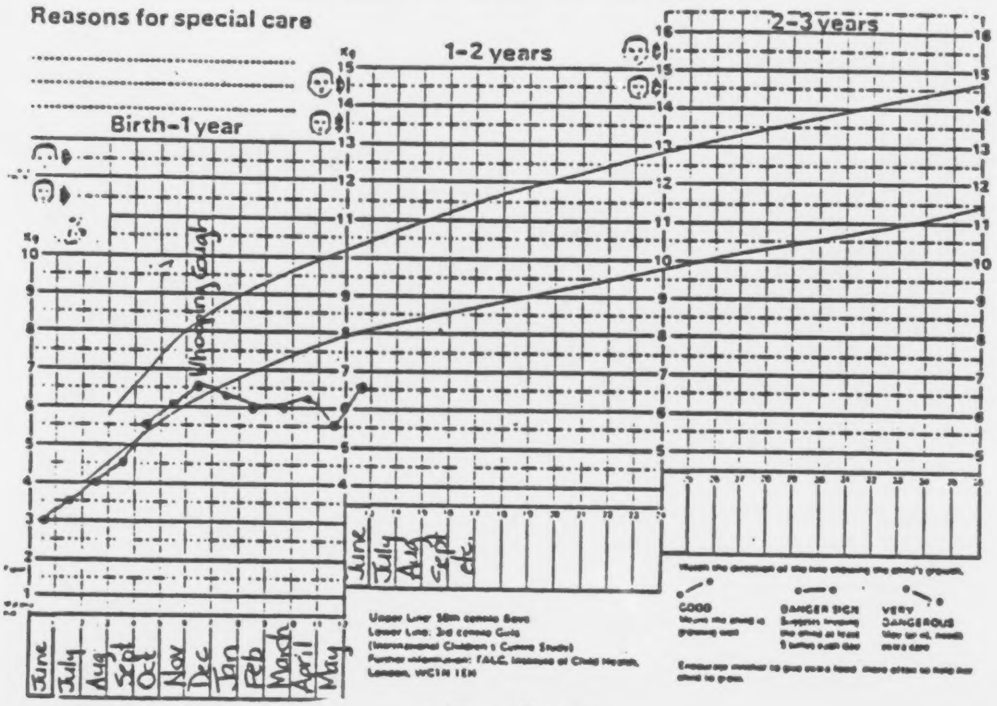
1. Discuss the importance of immunization programs by going over the handouts "Immunization Overview" and "Understanding the Six Target Diseases".

2. Using the following growth charts and the wall-sized growth chart, show the effects that measles, tuberculosis and whooping cough (pertussis) can have on the growth and survival of young children. Point out that these diseases can cause malnutrition in healthy children. In malnourished children, they often cause death.

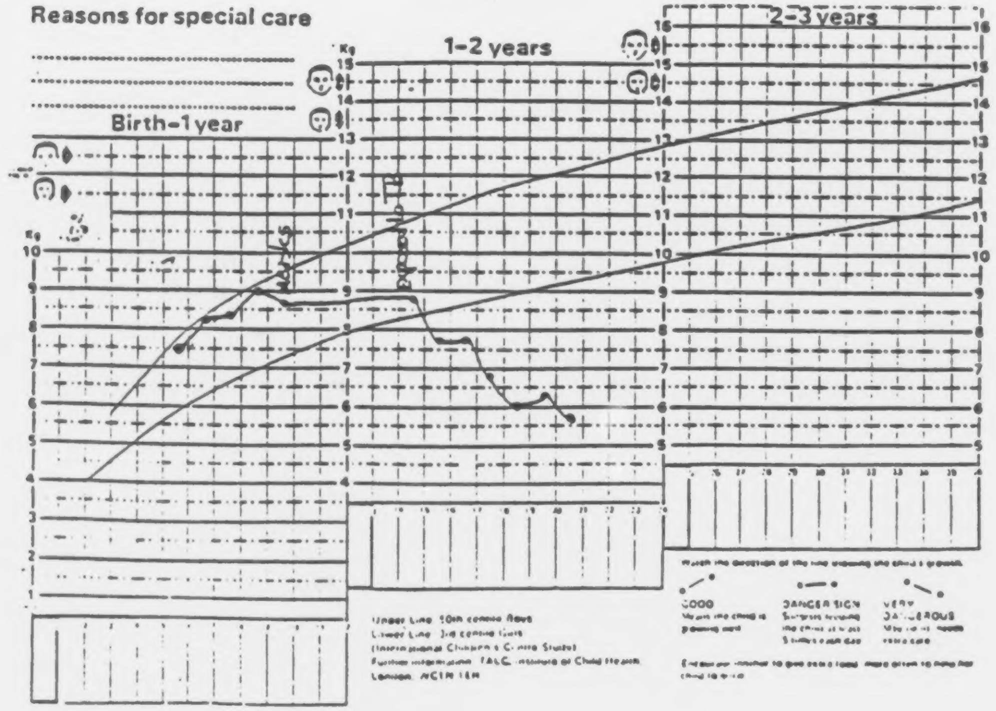
Measles


Reasons for special care
Birth–1 year
1–2 years
2–3 years
Kg
Measles
Diarrhea
Upper Line: 50th centile Boys
Lower Line: 3rd centile Girls
(International Children's Centre Study)
Further information: TALC, Institute of Child Health, London, WC1N 1EH
GOOD
DANGER SIGN
VERY DANGEROUS

Whooping Cough (Pertussis)



Tuberculosis



3. Review the immunization schedule handouts so trainees become familiar with the vaccines, number of doses and recommended ages and intervals for vaccination. Note that there are 3 schedules, the WHO standard recommended schedule, and illustrative examples for the simplified schedule and the single day campaigns.

4. Discuss some of the immunization problems noted in the handout that may occur such as missed dates, reactions and sick children. Explore ways in which the community can work with families and children to overcome these problems, and also other problems they may encounter related to traditional practices and cultural beliefs.

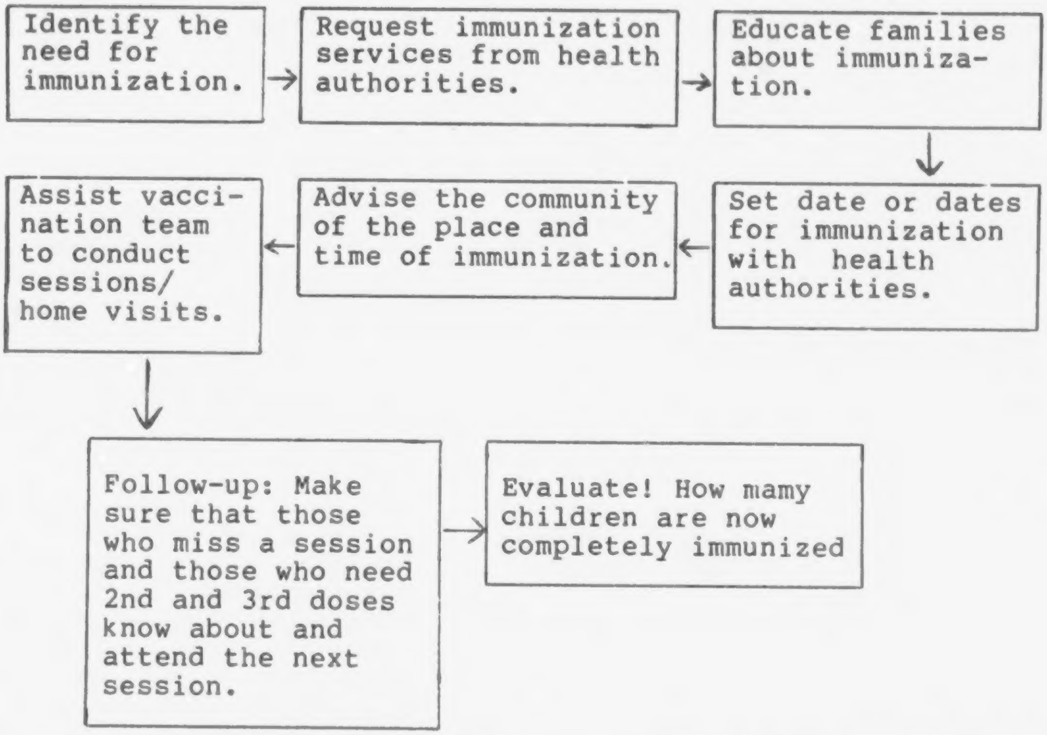
5. Go through the exercise on "Identifying Children Who Need Immunization" in order to demonstrate what is necessary to achieve full vaccination coverage.

   - Use the WHO recommended vaccination schedule handout to review what is full coverage for each disease.

   - Each trainee should complete the exercise form (using the WHO standard schedule) and note which children are not fully vaccinated. It should be stressed that those children who have not received all 3 doses for both DPT and polio are not fully covered. Also, we cannot simply total the number of DPT and polio vaccines given and assume that this total equals the number of children protected since 3 doses per child are required.

6. Discuss and list on the flipchart the steps trainees would take to improve the immunization coverage in this neighborhood.

7. Draw a diagram like the one below to summarize the steps a community might take to promote and organize immunization activities.


Identify the need for immunization.
Request immunization services from health authorities.
Educate families about immunization.
Set date or dates for immunization with health authorities.
Advise the community of the place and time of immunization.
Assist vaccination team to conduct sessions/ home visits.
Follow-up: Make sure that those who miss a session and those who need 2nd and 3rd doses know about and attend the next session.
Evaluate! How mamy children are now completely immunized

8. Explore ways in which the trainees might be able to mobilize the community to participate in immunization programs. Trainees who have organized community immunization activities may wish to tell the group about their successes and their problems. Problems raised should be discussed by asking trainees to suggest possible causes and solutions for each problem.

9. Help trainees identify whom to contact in their region to request immunization services.

10. Show educational materials available for community immunization promotion and explain how trainees can obtain them.

11. Summarize the session

    - Several serious diseases that cause malnutrition and death can be prevented by immunization. These include measles, tuberculosis, diphtheria, pertussis, tetanus and polio.

    - By identifying women and children who need immunization, and by coordinating with national and regional health officials, communities can insure protection from these deadly diseases.

Handout

IMMUNIZATION OVERVIEW

Six preventable childhood diseases for which vaccines are widely available are measles, pertussis (whooping cough), tetanus, polio, diphtheria and tuberculosis. Of these, measles is the most clearly related to diarrhea. Diarrhea often follows an episode of measles, and the combination of the two illnesses can be fatal. It is estimated that up to 26 percent of diarrhea-associated mortality could be prevented by measles vaccination.[1] Pneumonia, malnutrition and shigella dysentery are complications associated with measles. Preventing measles could also reduce the incidence of malnutrition and vitamin A deficiency, both of which are associated with serious attacks of diarrhea.

What is immunization?

Immunization is the giving of a vaccine or vaccines to stimulate the body to create immunity against specific diseases. Immunity is the body's ability to protect itself against the bacteria and viruses which cause disease.

Why immunize?

Every year in developing countries 110 million episodes of illness occur which could be prevented by immunization. As a result 3.5 million children die. Children with these illnesses are also more likely to develop other infections, such as diarrhea, as their resistance and ability to fight off infection is reduced. Widespread use of vaccines in the developed world is a major factor in the reduced mortality and morbidity from these six diseases and associated illnesses. Immunization is a more effective way of using scarce resources than treating diseases after they occur.

The six major childhood immunizations

Measles

- Measles vaccine is made from live measles virus which has been weakened (or attenuated) and is given subcutaneously in one dose. The infection provides long lasting protection against measles. Those vaccinated may feel unwell with a mild fever, and/or rash five to ten days after vaccination.

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[1] R.G. Feachem and M.A. Koblinsky: Interventions for the control of diarrhoeal diseases among young children: measles immunization. Bulletin WHO 61, 641-652, 1983.

Diphtheria, pertussis, tetanus

- DPT vaccine combines diphtheria, pertussis (whooping cough), and tetanus immunizations in one injection. The injection is given intramuscularly in three doses four weeks or more apart and protects for at least ten years against the three diseases. Common side effects to the injection include fever and redness and swelling at the injection site.

Polio

- The oral polio vaccine contains the weakened viruses of the three types that cause polio. It usually provides permanent protection against this crippling disease, and is given in three doses 4 weeks or more apart (usually at the same time as DPT). In countries where polio remains endemic, if possible, a child should receive an additional polio vaccination at birth.

BCG

- BCG vaccine is given intradermally (within the skin layer, raising a blister) and guards against tuberculosis (TB). Studies concerning efficacy of the BCG vaccine have produced conflicting reports. Most people agree that it gives good protection against the lethal forms of childhood TB. An ulcer forms at the injection site and heals without treatment, forming a scar.

Reprinted from Dialogue on Diarrhoea, "Health Basics: Immunization", Issue 30, September 1987, Appropriate Health Resources and Technologies Action Group, Ltd., London.

UNDERSTANDING THE TARGET DISEASES

(1) Measles. Measles is a highly contagious disease which 90 percent of the unprotected under-five population contract in some countries. A relatively mild disease in developed countries, measles is a major cause of childhood mortality in many developing countries, particularly in Africa and Central America. Poor nutritional status seems to be the main factor leading to the most severe consequences of measles. The common practice of withholding food during a child's illness exacerbates the condition. Death is caused by pneumonia, diarrhea, or in a small number of cases, encephalitis, in association with the disease. Maternal antibodies transferred through the placenta protect the infant during the first months of life. If measles vaccine is given to the infant before nine months of age, these antibodies may prevent the vaccine from producing immunity in the child. But if the child is vaccinated too late, the period of greatest danger to the child will be past. The seasonality of measles incidence should also be considered in deciding age guidelines.

(2) Pertussis. Pertussis (whooping cough) is second to measles as a cause of morbidity and mortality among vaccine-preventable diseases in some developing countries. The World Health Organization estimates that up to 80 percent of unimmunized children will contract it. Pertussis, an acute bacterial infection affecting the respiratory tract, is very contagious in the first week or two of infection. The spasmodic coughing or "whooping" that characterizes the disease is readily recognized and lasts one to two months. Pertussis is most severe in children under five months of age and may lead to death through pneumonia or other conditions. In very young children, there is no characteristic whoop, so the disease may be difficult to recognize. Immunity requires three vaccinations which may begin as early as six weeks of age.

(3) Tetanus. Caused by a toxin of a bacterium which enters the body through broken skin, this major killer of infants in developing countries is often caused by infection from the cut umbilical cord. Pregnant women who receive two tetanus toxoid immunizations pass immunity which protects the newborn during the first months of life. Tetanus bacteria reside in soil so, unlike smallpox, there is no hope of eliminating the reservoir of harmful organisms. Instead, protection comes only through immunization against the disease or through improved hygiene.

(4) Poliomyelitis. Polio is a vital disease spread by contact with objects, food, or water contaminated with excreta. Although polio infection is universal, most persons experience no symptoms. In a small minority of cases, polio leads to varying degrees of paralysis and, sometimes, death. The older the child at age of infection, the more likely the infection will lead to severe consequences. The use of polio vaccines in the last 20 years in developed countries has markedly reduced the incidence of polio; however, its relative infrequency has led to laxity and occasional outbreaks among the unimmunized. In developing countries, the incidence of paralytic polio appears to have been seriously under-estimated. Good evidence for the paralytic form of polio is lameness with no loss of the sense of touch in the affected limb.

(5) Tuberculosis (TB). TB is a bacterial disease spread by coughing and the sputum of infected persons. The disease takes many forms in children, infecting the bones, lungs, or brain. Often, it may not be recognized as the same disease that affects adults. TB is particularly common where many persons share the same crowded living quarters. In some cities in developing countries, one percent of the adults may be in the active infective stage of the disease. Improved housing, clothing, diet, early detection, and uninterrupted treatment-all difficult to achieve in many developing countries- are all necessary to effectively control TB. Even though BCG's efficacy under certain conditions has been questioned, it remains an important means of protecting many children in developing countries.

(6) Diphtheria. A major child killer of the past in temperate countries, the mortality and morbidity of diphtheria are the least well documented of the six diseases in developing countries today. Although typically manifested as an acute infection of the throat, diphtheria can affect the heart or brain of infants and young children. Vaccination against diphtheria over the past 50 years has eliminated the disease in many developed countries. Partial immunity acquired through skin infections with C. diphtheria in cuts and abrasions may protect many children in developing countries from the severe infection.

Of the six diseases reviewed here, measles and paralytic polio are the most likely to be eliminated in humans (although not eradicated from the environment) through a continuous and comprehensive immunization program. TB and tetanus are greatly influenced by general living conditions and sanitation, and will decrease as standards of housing and hygiene improve. The overall incidence of measles and pertussis is not greatly affected by living standards, but cases are much less severe and occur later when children are well nourished. Diphtheria and polio, by contrast, may actually increase as standards of living improve and children do not gain natural active immunity.

Reprinted from Immunizations: Information for Action Issue Paper; World Federation of Public Health Associations, May 1984.

WHO RECOMMENDED IMMUNIZATION SCHEDULE

Vaccine	Age at First Dose	Number of Doses	Minimum Interval Between Doses	Comments
BCG (intra-dermal injection)	Birth	1	--	BCG given at the earliest possible age protects against the possibility of infection from other family members BCG scar is often used as an indicator of previous BCG immunization
DPT (Intra-muscular injection)	6 weeks	3	1 month	An early start with DPT reduces the chances of severe pertussis. Followed by four week intervals for effective protection reduces the time a child is exposed without protection, particularly to pertussis
Polio (Oral)	Birth	3	1 month	The extent of protection against polio is increased the earlier the OPV is given
Measles (Sub-cutaneous injection)	9 months	1	---	At least 80 per cent of measles in the third world can be prevented by immunization at this age
Tetanus	Women of child-bearing age	At least 2 doses before or during early pregnancy; should not be given later than 2 weeks before delivery	1 month	-- for pregnant women with no previous tetanus immunization - 2 doses during pregnancy -- for pregnant women with 3 previous tetanus immunizations during childhood - 2 boosters during pregnancy required -- After 5 doses, all children born are protected from maternal tetanus

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*BCG: Bacillus Calmette Guerin (against TB)
*OPV: Oral Poliovirus Vaccine (dose at birth is in addition to the standard schedule of 3 doses)
*DPT: Diphtherial/ Petussis/ Tetanus Toxoid

BEST COPY AVAILABLE

Handout

Simplified schedule for remote population (two contacts as used in parts of West Africa)

Vaccine	Age	Comments
DPT(1)-IPV(1), BCG	All children 3-8 months old	IPV in two doses is protective against paralytic polio
DPT(2)-IPV(2), Measles	All children 9-14 months old	In remote areas the average age of contracting measles is delayed to the second and third years of life and later vaccination is still effective

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N.B. IPV: Inactive Poliovirus Vaccine
DPT-IPV may be obtained in a single preparation
EPI also recommends that OPV be added to this schedule

Handout

Semi-annual single day 'pulse' campaigns (as used in Brazil)

Vaccine	Age	Number of Doses	Comments
OPV	All children 0-59 months old	Up to 10 doses	After regular vaccination with OPV vaccine, the virus replaces the naturally occurring disease-causing virus in the environment
Measles	All children 9-23 months old	Up to 2 doses	Giving a second dose of measles vaccine increases effective coverage
DPT	All children 2-11 months old	2 doses	Third DPT through regular primary health care services in clinics; 2 doses of DPT are partially effective (50-60%) against pertussis

Immunization Schedule

Infants and children

All children should be immunized against the preventable childhood diseases. The immunization schedule describes the number of times that a child needs to be given vaccinations and how far apart each visit should be. Following the ideal schedule, each child should be fully immunized by the age of nine months, or soon after, because infants are at greater risk from these diseases. Many countries try to immunize all children under five years of age who may be at risk.

Women

Neonatal tetanus is prevented for several years by immunizing women of child-bearing age with at least two doses of tetanus toxoid. After five doses of tetanus toxoid all children born subsequently are protected from neonatal tetanus. A woman who received three doses of DPT as a child will greatly increase her infants' protection by two boosters (ideally before or during early pregnancy) when she is ready to bear children. (Hygienic cord treatment can also prevent neonatal tetanus but is not as effective as complete immunization of the mother.)

(Above reprinted from Dialogue on Diarrhoea, "Health Basics: Immunization," Issue 30, September, 1987)

The following handouts present 3 immunization schedules. The WHO recommended schedule provides the optimum schedule in which a child will be fully immunized by 9 months. However, recognizing that numerous children in many developing countries have not been immunized according to this schedule, children may begin to receive vaccinations at an older age. In addition, other program approaches have been implemented in efforts to address this deficiency in providing widespread vaccination coverage to children. Two other illustrative approaches, the simplified schedule and the pulse campaign are also presented. The simplified schedule focuses on vaccinating younger children under 14 months through 2 contacts. These 2 contacts can be spaced according to the country situation. This approach has been restricted primarily to Francophone Africa to date. The pulse campaign also focuses on children up to 2 years for measles and DPT and up to 5 years for polio. The pulse campaign, also often referred to as a mass campaign, is carried out in an effort to catch up the backlog of children that may not have been previously vaccinated and may also fall outside the normal health care network responsible for vaccination programs. However, most country immunization programs continue to follow the WHO recommended schedule.

Immunization Problems: Missed Dates, Reactions and Sick Children

If it is not possible to bring a child for immunization on the right day, the immunization must be given as soon as possible afterwards. Once begun, a series of immunizations must be completed to be effective. Even if the time between immunizations is longer than recommended, the next dose in the polio and DPT series is given; there is no need to start from the beginning again. Only a completed series of immunizations adequately protects a child. In remote areas, and places where for other reasons it is not possible to do this, simplified schedules and mass immunization days have been used.

Vaccine schedules have to suit the circumstances in particular countries. Ideally, most developing countries should follow the WHO recommended schedule of five contacts but this requires an effective health infrastructure to which all people have access. Mass campaigns, with immunization days, can successfully increase awareness about immunization and vaccinate large numbers of children. However, only when health systems are developed to ensure regular vaccination of all newly born children every year, will full coverage be achieved.

Reaction to Immunization

After immunization some children develop mild reactions, such as fever, or a swollen area around the injection site. This is quite normal with some vaccines and may be part of the body's response to developing protection. Parents should be told that this is likely to happen so that they do not worry about it and it does not prevent them:

- from bringing the child back for further immunization doses; or

- from bringing their other children to the clinic for immunization.

Can a sick child be immunized?

Mothers sometimes do not bring a sick child for immunization and if they do, health workers frequently do not immunize them. Mothers and health workers need to know that **all EPI immunizations are safe and effective even if a child is ill** with fever, diarrhea, vomiting, or respiratory infection. No chance should be missed to immunize a child. This is a recommendation of the EPI.

The benefits of immunization far outweigh the risk, especially in malnourished children. Only in very few exceptional cases is it not advisable to immunize. For example, a child who has had a severe reaction to DPT (fits, extreme crying) should not be given pertussis immunization, but should get diphtheria-tetanus vaccine.

Reprinted from Dialogue on Diarrhoea, "Health Basics: Immunization," Issue 30, September 1987.

EXERCISE: IDENTIFYING CHILDREN WHO NEED IMMUNIZATION

1. You have just completed an immunization survey in your neighborhood. By interviewing mothers and reviewing immunization cards, you collected the following information:

Maria (13 months) - no vaccines
John (2 years) - BCG, Polio I

Henry (3 years) - BCG
Edward (6 months) - no vaccines

Richard (4 months) - no vaccines
Tom (3 years) - no vaccines
Ellen (4 1/2 years) - Measles, BCG

Jane (18 months) - BCG, measles
Ruth (4 years) - BCG, measles

Caroline (7 months) - no vaccines
Susan (2 1/2 years) - BCG
Peggy (4 1/2 years) - Measles, DPT I&II, Polio I&II

Mary (1 year) - no vaccines
Louisa (3 years) - no vaccines

2. Transfer this information to the chart below. Complete one column on the chart for each child, by writing the child's name at the top and putting an X in the column next to the vaccines each child has taken.

CHILDREN 0-5 YEARS NAME:															
BCG 1 dose															
Measles 1 dose															
DPT 1° dose															
2° dose															
3° dose															
Polio 1° dose															
2° dose															
3° dose															

3. Answer the questions below about the immunization status of children in your neighborhood.

- How many children were included in your survey?
- How many children **have not had** the following immunizations?

	Number	% of Total Children
BCG		
Measles		
DPT (3 doses)		
Polio (3 doses)		

What will you do to achieve your goal of completed immunizations for all children in the neighborhood?

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UNIT 7

FAMILY PLANNING AND NUTRITION

SESSION 1: Family Planning and Nutrition

SESSION 2: Providing the Facts About Family Planning

SESSION 3: Community-Based Distribution of Family Planning Methods

UNIT OVERVIEW

Short birth intervals and large families are common causes of malnutrition in most countries. Communities can help prevent malnutrition by making family planning information and contraceptive methods available to all couples.

When we use the term "family planning" in this unit, we are talking about two things:

- Lengthening the time between births - **birth spacing**
- Limiting the total number of births according to what a couple desires

SESSION 1: FAMILY PLANNING AND NUTRITION

Successful programs to improve nutrition and increase family planning acceptance provide factual information to men and women. Some also prepare adolescents for their future roles as parents by providing orientation in responsible parenthood and reproductive physiology.

Purpose:

Trainees review the benefits of family planning and the traditional and modern methods of contraception. Facts about breastfeeding and family planning are also discussed.

Time: Family planning workers - 1 hour review
Non-family planning workers - 2 hours

Materials:

- Flipchart and marking pens
- Handout - "Facts About Family Planning Methods"
- Handout - "Breastfeeding and Family Planning"

Steps:

1. Read the two problem cases below to the group.

> Problem 1
>
> A community worker visits the home of a middle-income family in the village. The mother greets her carrying a healthy four-month-old baby boy. Behind her is a thin little girl about two years old; her dark hair is streaked with light colored areas and she is coughing. When the worker measures her arm with the three-color tape, she finds that the little girl is severely malnourished (Red). The community worker thinks, "This is a prosperous family. How can they have such a sick child?"

Problem 2

In another home, the worker meets a mother who has just come from the field. Looking around, the worker notices that the house is in very poor condition. Chickens, buffalo and people seem to share the same living space. There are two young children in this family, one about four years old and the other eighteen months old. Both children have yellow arm circumference (moderate malnutrition). The older one is sick with fever and diarrhea. The woman tells the worker that she has given birth to nine children but only four are living; all of the others died before they were four years old. The worker asks herself, "What can be done to help this family?"

Ask the following questions about each problem to promote discussion:

- What are the possible causes of malnutrition?

- What should the community worker do to help the family?

Answers should include:
- Teach them how to feed the child.
- Talk to them about family planning.

2. What Is Family Planning?

Ask trainees to define "family planning" by finishing the sentence:

Family planning is ____.

Write five or six responses on the flipchart, and work with the group to develop a definition that all can accept. Some of the definitions from other workshops have included:

- "Family planning is having the number of children you want when you want them."

- "Family planning is having the number of children you can support emotionally and financially."

3. Tell trainees that the term **Family Planning** will be used in this unit to mean two things:

- Spacing births to insure the health of mothers and children
- Limiting the number of births to control the size of one's family

4. Benefits of Family Planning

   Ask trainees to brainstorm answers to the following question:

   - "How does family planning contribute to improved nutrition and health for women and children?"

   Write the answers on the flipchart.

5. Review the following consequences of closely spaced, repeated pregnancies:

   - **Maternal depletion** - Women who do not allow at least two years between pregnancies are more often malnourished than those who allow two or more years between births. Women who do not space their pregnancies have a greater chance of complications during pregnancy and birth; their infants may be small and malnourished; and they may have difficulty breastfeeding.

     Family planning can help a couple to allow at least two years between births. This allows a woman to regain her strength so that she and her infant will be properly nourished and healthy.

   - **Early termination of breastfeeding** - If a woman becomes pregnant when her youngest child is less than two years old, that child will often become malnourished. In some cultures, this is because breastfeeding is stopped as soon as the woman discovers she is pregnant, or shortly before the new baby arrives. When this happens, the young child loses the nutrients from breast milk at the same time that he is exposed to more contamination from new foods. Also, the mother has less time to care for the older child even though he is at a stage (weaning) when more attention should be given to feeding and hygiene. Protein energy malnutrition is frequently the result of the early termination of breastfeeding because of a new pregnancy.

     Family planning can help couples space the births of their children so that one child has passed the critical weaning stage before another one is conceived.

(For a more detailed discussion of breastfeeding see Session I-3)

- **Limited family resources, especially food** - The amount of food a family can produce or buy is an important determinant of nutrition status. The number of family members determines the amount of food given to women and children as well as the family's resources for health care, education, etc.

  Family planning can help families limit the number of children to those they can feed and care for.

6. Traditional Methods of Family Planning

   Point out that family planning is not a new practice in most areas. Ask trainees if couples in their areas have any traditional ways for avoiding births. These might include:

   - **Abstinence** from sexual intercourse. In Africa, couples traditionally abstained from intercourse while a woman was breastfeeding (2-3 years). In polygamous areas, a husband would often stay with another of his wives during this period. These customs are changing rapidly in many areas.

   - **Breastfeeding** - Breastfeeding (on demand) gives several months of natural protection from pregnancy to most women. However, use of feeding bottles and the introduction of breast milk supplements at earlier and earlier ages have shortened the natural birth-spacing effects of breastfeeding.

   - **Septic Abortion** - For centuries, women have resorted to illegal abortion to avoid having additional children. These abortions are often performed by untrained persons under unsterile conditions. In Latin America, complications from septic abortion are estimated to cause 30-50% of maternal deaths; in Bangladesh, 26% of pregnancy-related deaths have been attributed to illegal abortions. Although underreported, septic abortion is believed to be a significant cause of maternal death throughout the developing world. (Favin, et al. "Improving Maternal Health in Developing Countries," p. 3-6)

7. Modern Methods of Family Planning - Distribute the Handout - "Facts About Family Planning Methods." Use pictures/slides and samples of contraceptives available in the areas where trainees work, to describe:

- what each method looks like;
- how it is used;
- how it functions to stop pregnancy;
- common side effects and danger signs.

Point out that, in order to be effective, some family planning methods require significantly more knowledge and more motivation on the part of the users than do other methods.

(You may need to review the physiology of reproduction with some groups.)

8. Breastfeeding and Family Planning - Distribute the Handout - "Facts About Breastfeeding and Family Planning." Review the relationship between breastfeeding and the nutrition status of an infant. List the contraceptives that are appropriate for use by a breastfeeding woman. Discuss when a couple should begin using a family planning method to delay a new pregnancy. This varies from community to community. (See WHO, Breastfeeding and Fertility Regulation, p. 377.)

9. Summary - Ask participants to list information presented during this session that was new to them.

   Leave time for questions and answers. Even groups with previous family planning experience and training will have questions and doubts that need to be answered.

FACTS ABOUT FAMILY PLANNING METHODS

METHOD	WHAT IT DOES	HOW IT IS USED	POSSIBLE PROBLEMS	WARNING SIGNALS
Permanent Methods				
Vasectomy - Men	A small section of the vas deferens (the tube through which sperm travels from the testes to the penis) is removed. This blocks the sperm from leaving a man's body in the semen, but has no effect on potency or ability to have intercourse. Effectiveness: 99%	A vasectomy is a surgical procedure. A local anesthetic is given and a small incision is made in the scrotum on the right or the left side. The vas is found, a small section is removed and the incision is closed. This is repeated on the other side.	Swelling and discomfort following the surgery. Infections occur in rare cases. Because a man is not immediately sterile after a vasectomy (some sperm remain in the tubes), precautions should be taken by using a temporary contraceptive for at least the first month. In rare cases, the vas may grow together again. This can result in an unwanted pregnancy.	Excessive pain or swelling Fever
Tubal Ligation - Women	A small section of each fallopian tube is removed or clamped. This blocks the eggs from traveling from the ovaries to the uterus, and it blocks sperm from reaching the egg for fertilization, but has no effect on the ability to have intercourse. Effectiveness: 99%	Mini laparoscopy is the next common and the simplest method of tubal ligation. A local anesthetic is given and a small incision (2-3 cm) is made below the umbilicus. The fallopian tubes are found, using the laparoscope, and a small section of each is either removed, cauterized or clamped. The incision is closed with absorbable sutures.	Pain and discomfort following surgery. In a few cases, the tubes grow back together and pregnancy occurs. If a woman misses a period, she should visit a health worker immediately to find out if she is pregnant.	Fever greater than 100 F Fainting spells Abdominal pain that increases over 12 hours Bleeding from the incision

METHOD	WHAT IT DOES	HOW IT IS USED	POSSIBLE PROBLEMS	WARNING SIGNALS
Temporary Methods				
Oral Contraceptives	Oral contraceptives contain hormones similar to those produced in a woman's body. These hormones keep the ovaries from releasing eggs. Menstruation continues but may be lighter than before. Effectiveness: 98%	Take oral contraceptives as directed (usually 1 pill each day for 28 days or 21 days with 7 days rest). If pregnancy is desired, stop taking the pills and wait for menstrual periods to resume normally.	Women with high blood pressure, diabetes and excessive weight should not take pills. Women 35 years or older should also be given another method. Breastfeeding women should not take combined oral contraceptives during the first months post-partum because they may decrease milk production.	Swelling or pain in legs Yellowing of skin or eyes Pain in abdomen, chest, arms Shortness of breath Severe headaches Severe depression Blurred or double vision
Intrauterine Device (IUD)	The IUD is a small device made of plastic. The Copper-T and Copper-7 IUD's also contain small amounts of copper. When placed in the uterus, the IUD prevents pregnancy by changing the lining of the uterus. Effectiveness: 96%	An IUD is inserted through the cervix into the uterus by a clinically trained person. The IUD remains in place until it is clinically removed. Some IUD's can remain indefinitely; others using copper must be replaced every 3-4 years.	Many women experience cramping and heavier than normal bleeding during menstruation. The device can also fall out of the uterus, in which case pregnancy may occur. Women should be taught to check the string of the IUD in the vagina to make sure it is in place. If pregnancy occurs, the IUD should be removed immediately to avoid infection.	Severe pain in the lower abdomen Pain during intercourse Unexplained fever and/or chills Increased bad-smelling discharge Inability to find the string

METHOD	WHAT IT DOES	HOW IT IS USED	POSSIBLE PROBLEMS	WARNING SIGNALS
Injection (Medroxyprogesterone acetate [Depo Provera])	A hormone similar to that produced by a woman's body acts to prevent the release of eggs by the ovaries. Effectiveness: 98%	An intramuscular injection is given once every three months to non-pregnant women. The injection should be taken again after three months to insure lasting protection from pregnancy.	Irregular menstrual bleeding; delayed return of fertility after suspending injections; weight gain. Should not be taken by women with irregular genital bleeding, diabetes, cancer.	Prolonged, excessive bleeding Chest pains
Condom	The condom is a sheath of thin rubber or animal tissue worn by the man to keep sperm from entering a woman's vagina Condoms also prevent spread of venereal disease. Effectiveness: 90% (If the woman uses a vaginal spermicide at the same time, effectiveness is increased.)	The condom is put on the man's erect penis before insertion into the vagina during intercourse. About one-half inch at the top of the penis is left slack to catch the semen. After climax, the condom should be held against the penis as the man withdraws so that the semen does not spill into the vagina. A new condom must be used for each act of intercourse.	Rough handling may tear the condom. Exposure to excessive heat can also weaken rubber and make it more susceptible to tearing.	None
Vaginal Spermicides	Foams, foaming tablets, jellies and creams contain chemicals (spermicides) that stop the sperm from entering the uterus but do not harm the vagina. Effectiveness: 85% (If a man uses a condom at the same time, effectiveness is increased.)	One of these methods is inserted in the vagina before intercourse. It spreads over the entrance to the uterus and the chemical halts sperm movement. Some should be inserted not more than one hour before intercourse; others not more than 10 minutes. More spermicide must be inserted for each act of intercourse.	No known side effects except occasional itching.	None

METHOD	WHAT IT DOES	HOW IT IS USED	POSSIBLE PROBLEMS	WARNING SIGNALS
Breastfeeding	Breastfeeding stimulates certain hormones in the woman's body that keep her ovaries from releasing eggs. Menstruation may be suspended for many months when breastfeeding is frequent (on-demand). Effectiveness: 91-97% Before return of Menstruation.	To be an effective, family planning method, breastfeeding must be on-demand and supplements to breast milk must not be given until 4-6 months. Breastfeeding is an effective contraceptive method for most women until 1-2 months before the return of menstruation. Since it is not possible to know exactly when this will occur, another temporary method of contraception is usually recommended after the (sixth) month.	Breastfeeding-women should not be given combined oral contraceptives during the first months post-partum, as they may reduce milk production. Early return of menstruation. Pregnancy.	None
Natural Family Planning	A woman's body changes each month as it completes the cycle of ovulation and menstruation. Specific signs of ovulation (release of eggs by the ovaries) can tell a woman when she is most likely to become pregnant. By avoiding intercourse several days before, during and after ovulation, a couple can avoid pregnancy. Effectiveness: 81%	A woman's body temperature rises a little when an egg is released and stays up until she begins menstruating. The vaginal mucus increases just before an egg is released, and is clear and slippery. After ovulation it becomes cloudy and sticky. In natural family planning, the temperature is taken and/or the vaginal mucus is checked daily. A woman can learn to recognize the signs of ovulation and take steps to avoid intercourse during this period.	Care must be taken when keeping records and interpreting signs. Illness can produce a rise in temperature. Vaginal infections or use of medications can make it impossible to detect changes in natural vaginal mucus. Mistakes in calculating when when ovulation will occur will result in pregnancy.	None

FACTS ABOUT BREASTFEEDING AND FAMILY PLANNING

1. In most parts of the developing world, more births are avoided by breastfeeding than by any other method of family planning.

2. The suckling of an infant at the breast inhibits ovulation, or the release of eggs by the ovaries. This in turn stops menstruation until some months after birth. While a woman is not ovulating, she cannot become pregnant.

3. Frequent breastfeeding (on-demand), including night feeds, increases the number of months of natural protection from pregnancy.

4. There is no sure way to predict when ovulation will return: In some women it will return at six months; in others between twelve and twenty-four. Still others may have more than two years of protection.

5. Because it is impossible to say exactly when a woman will again be fertile, most programs decide on a specific number of months post-partum (i.e., six months) when they begin advising women to use another family planning method to avoid pregnancy.

6. Studies indicate that combined oral contraceptives (estrogen and progesterone) may reduce breast milk production.

7. During the first 4-6 months post-partum, breastfeeding-women should be advised to use a family planning method that does not affect breastfeeding. These include:

    - Intrauterine Device
    - Vaginal Spermicides
    - Condoms
    - Vasectomy
    - Tubal Ligation
    - Injectables (Depo Provera)
    - Progestogen-only Oral Contraceptives

8. Breastfeeding should be encouraged for its nutritional and natural child-spacing effects. The trend away from breastfeeding is very serious. It will result in more malnutrition and higher birth rates in many parts of the world, if it is not reversed.

SESSION 2: PROVIDING THE FACTS ABOUT FAMILY PLANNING

Purpose:

Trainers list rumors and attitudes that have a negative effect on family planning acceptance in their areas. They then identify facts that counter these attitudes and rumors and discuss ways for making factual information about family planning available.

Time: 1 hour

Materials:

- Flipchart and marking pens

Steps:

1. Introduction: Couples may reject the use of family planning for different reasons:

    - They want to have another child in the near future
    - They have heard rumors about family planning methods
    - They have cultural or religious reasons for not accepting family planning
    - In-laws are opposed
    - Etc.

    In many cases, couples do not have the factual information they need to make an informed decision about contraception. In this session, we will discuss some of the specific facts about child-spacing and family planning methods that couples need in order to make an informed choice. We will also identify different methods for providing information to couples in their communities.

2. Ask trainees to begin by listing all of the rumors and negative beliefs that they have heard about family planning. When they finish, make a group list of rumors and beliefs on the chalkboard. Do this by asking each trainee for a rumor or belief from their list.

    Ask trainees to list facts that would disprove each incorrect rumor. For each belief or attitude against family planning, ask them to think of a logical response that might help change the negative attitude. Write these on the right side of the chalkboard across from the rumors and attitudes they refer to.

3. Role Play: Conduct several role plays based on the rumors and negative beliefs listed above. In the role

plays, a "family planning promoter" should try to convince a woman, man or couple that a rumor they have heard about family planning is untrue. Encourage the role players to provide facts, use examples and develop persuasive arguments to dispel these rumors. Make sure that "family planning promoters" are courteous and respectful of other people's beliefs and attitudes. They won't change attitudes by offending their clients.

4. Community Education: Ask trainees to list different types of community activities and events in which information about family planning could be presented and discussed.

   Examples:
   - discussions with organized groups (women's groups, cooperatives, teachers, etc.)
   - education sessions in the clinic
   - home visits
   - community meetings

   Encourage trainees to tell the group about successful activities they have conducted or participated in that increase people's knowledge about family planning.

5. Ask: "Who should provide family planning information to the community?"

   Examples:
   - doctors, nurses
   - chief or village leaders
   - satisfied family planning users (men and women)
   - volunteer health workers
   - extensionists

   Discuss the advantages and disadvantages of involving each type of individual listed. What kind of training would each need?

6. Summarize:

   Community programs to improve nutrition must provide correct information about:

   - the benefits of child spacing and small families;
   - modern methods of family planning;
   - family planning for the breastfeeding mother.

   Negative attitudes and rumors about family planning can be changed by providing factual information about family planning methods, and by stressing the benefits of small families and birth spacing to the family and the community.

Activities to spread family planning information could include presentations and discussions with groups as well as counseling of individuals and couples. Promotion of family planning by community leaders, medical professionals, satisfied family planning acceptors and other respected individuals can be important in changing community attitudes towards family planning.

SESSION 3: COMMUNITY-BASED DISTRIBUTION OF FAMILY PLANNING METHODS

Once couples know about and want to use family planning, they must be able to obtain an effective contraceptive method without excessive expenditures of time and money. Community-based programs can help couples obtain contraceptives and/or learn about natural family planning in several ways:

- Provide contraceptives in the community through a clinic or community workers
- Provide referral for contraceptive services and transportation to a nearby clinic
- Provide follow-up of contraceptive users to encourage continuation and solve problems with side effects
- Keep records of the eligible couples and family planning acceptors in the community

Purpose:

Trainees discuss the availability of family planning services in their areas and the socioeconomic barriers to the use of these services. The advantages of community-based distribution (CBD) of contraceptives are listed and the components of a CBD program discussed.

Time: 2 hours

Materials:

- Handout - Case Study: Community-Based Family Planning Service Delivery
- Flipchart and marking pens

Time: 2 hours

Steps:

1. Ask trainees to complete the following chart:

   Where do people in your area currently go to obtain family planning services:

Location	How far is this from village(s)?	Cost Round Trip	Time Round Trip	What methods are provided?

2. Discuss the effects that **distance, cost** and **time** for travel have on family planning acceptance and continuing use. Brainstorm other reasons why women who want to avoid pregnancy may not visit family planning clinics. These may include:

    - Cultural restrictions on women's movement
    - Negative attitudes toward family planning
    - Poor treatment by health workers
    - Lack of privacy

3. Role Play: Divide into work groups (5-6 people). Assign each work group the task of developing and presenting a role play based on the following situation:

> Elizabeth has had four children. She and her husband have decided that they should wait for a few years before having another child. A family planning worker visited her several months ago and referred her to the clinic in Kisumu. Two months ago she traveled to Kisumu. Kisumu is 15 km away from Elizabeth's village. On most days the bus ride is about two hours. However, on the day she traveled to Kisumu, it was raining so hard that the bus became stuck and they arrived late. At the clinic, she was made to wait for a long time until she finally saw the nurse. It was so late when she finished that she had to wait until the next day to return to her village. Her husband was angry and accused her of lying about the wait at the clinic and the money she had spent on the bus and the contraceptives. The nurse gave Elizabeth three packages of oral contraceptive pills and told her that she must come back at the end of three months to get more.
>
> In this role play, the family planning motivator is again visiting Elizabeth. Elizabeth explains to her why she has decided **not** to return to the clinic in Kisumu to fetch more contraceptives.

Trainer: Write your own role play situations based on local problems of transportation, cultural restrictions, health worker/client interactions, etc.

4. Case Study: Distribute the Handout - Case Study: "Community-Based Family Planning Service Delivery." Ask trainees to read the case study individually and then to work with their groups to answer the questions at the end of the case study.

5. Go over the group's answers to the case study questions. Point out that community-based distribution:

   - makes family planning methods easily available in the community;
   - helps overcome geographic and financial barriers to contraceptive use;
   - helps overcome restrictions on women's mobility and contact between female clients and workers;
   - allows for rapid follow-up of family planning acceptors to insure continuation of use.

6. Management Decisions: Review the important decisions managers must make when planning a CBD program:

   - What contraceptives should be provided in the community?
   - Who should provide contraceptives in the community? (Selection, qualifications)
   - What kind of training will community workers need?
   - How to supply and monitor contraceptive supplies?
   - Where to refer? For what reasons? For what services?
   - How to supervise CBD workers?

7. Stress the importance of an effective referral system for any CBD project. The referral system must support the work of the community worker and provide clinical assessment and services as needed.

8. Summarize the unit:

   Spacing births and limiting the size of a family means better health and nutrition for women and young children.

   Modern and traditional methods of family planning make it possible for couples to have the number of children they can support.

   Two important reasons why couples do not practice family planning are lack of information (or misinformation) and lack of access to contraceptives and contraceptive services.

   Communities can play an important role in making information about family planning and contraceptive methods available to of their members.

   Community-based family planning distribution programs can be organized with the active participation of community members to make contraceptive services available to all interested couples.

CASE STUDY: COMMUNITY-BASED FAMILY PLANNING SERVICE DELIVERY

Concerned Women for Family Planning was started in 1976 to provide family planning services to poor women living in the crowded slums of Dhaka, Bangladesh. The founders of the organization had come to realize that low-income women throughout the city were eager to obtain the "baby preventing medicine" they had heard about but could not visit family planning clinics for a variety of reasons. In Bangladesh, the majority of women live in "purdah," or behind the veil. Their contacts are limited to the members of their families, and they seldom leave their own homes or compounds. Traveling to a family planning clinic, staffed by male and female workers, poses serious cultural as well as economic problems for most women.

To overcome these barriers, Concerned Women for Family Planning started a pilot program for the household distribution of family planning information and contraceptives. A team of four field assistants and one supervisor began working in a neighborhood of approximately 74,000 people. The neighborhood was divided into four sections, with each field assistant responsible for the families in one of the sections.

Field assistants began by visiting and getting to know the women in each of their sections. At the same time, they carried and distributed oral contraceptives and condoms and provided information on other clinical methods of family planning. Each field assistant eventually reached all of the homes in her section; however, more emphasis was placed on acceptor satisfaction and continuation than on the total number of new acceptors she recruited. Other programs had shown that many couples who decided to try family planning methods would discontinue use because of minor side effects or general dissatisfaction with the contraceptive method they had chosen. Concerned Women found that follow-up visits, during the first few months after a couple began using a contraceptive, would help them adjust to the method or change to a more satisfactory method without discontinuing family planning use.

Besides household distribution of contraceptives and active follow-up of acceptors, the Concerned Women's program provided referral and transportation to women who were interested in clinical family planning methods, sterilization, IUD insertion and Depo Provera injections. These clinical services were provided to clients referred by Concerned Women at two clinics in Dhaka.

During the first month of the Concerned Women project, 268 couples accepted family planning methods. Of these, 70 percent were still using family planning methods a year later. These high levels of acceptance and continuation proved that the Concerned Women's strategy worked!

Because of its success, the Concerned Women's program has continued to expand. By 1977, 88 field assistants and supervisors had been trained, and were providing information and delivering contraceptives house-to-house in 17 neighborhoods. In 1978, Concerned Women opened its women's clinic in the heart of the most crowded area of the old city, and the program is still growing. Today, the Concerned Women's program includes counseling, maternal/child health care, nutrition education as well as family planning services.

Trainer: This case study describes an urban, community-based distribution program designed to overcome cultural restrictions on women's movement outside the home.

It is best to develop a case study for a program that increases access to family planning methods by overcoming the most important barriers in your region. For example, in rural areas, distance and cost of transportation may be major barriers to the acceptance of family planning.

CASE STUDY QUESTIONS

1. What barriers to family planning acceptance did the program in the case study overcome?

2. What family planning methods were provided in the community?

3. Where did the community workers (field assistants) refer clients for clinical services? What family planning methods and services were provided at these referral points?

4. Why do you think this program has been so successful? (List as many possible reasons as you can think of.)

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PART II

PLANNING NUTRITION ACTION PROJECTS

UNIT 1

WORKING WITH THE COMMUNITY TO IMPROVE NUTRITION

SESSION: Simulation Exercise

SESSION: SIMULATION EXERCISE

Purpose:

To demonstrate the advantages of working with the community to plan and carry out action projects.

Time: 1 hour

Materials:

- Tinkertoy pieces or any materials that can be used for table top construction of small structures. Sufficient materials so that each trainee has at least 10-15 pieces of building materials. (In Indonesia, straws and paper clips are used.)
- Measuring stick or ruler
- Flipchart and marking pens

Preparation:

- Before the session, prepare work spaces (tables) for groups of 8-10 trainees.
- Place a set of building materials at each table.

Trainer's Note:

In this exercise, trainees will be divided into "Community Advisors" and "Community Members." They will work in three different situations to complete a simple task:

Situation 1 - ADVISORS work alone
Situation 2 - ADVISORS plan then instruct COMMUNITY MEMBERS how to complete the task
Situation 3 - ADVISORS and COMMUNITY MEMBERS plan and complete the task together

DO NOT DISCUSS THE PURPOSE OF THE EXERCISE WITH TRAINEES BEFORE CONDUCTING IT. When trainees have finished the exercise, you will help them analyze the results of the three different work situations.

Steps:

1. Tell trainees they will now take part in a simulation exercise. Explain that you will discuss the purpose and results of the exercise with them after it has been completed.

2. Divide trainees into groups of 8-10 persons each. Ask each group to sit at one of the tables. Each group member should have 10 or more pieces of building material. Explain that these building materials are the resources that groups will use to complete the exercise.

3. Divide each work group into equal numbers of ADVISORS and COMMUNITY MEMBERS.

4. Conduct the three situations below:

   Situation 1

   - Only ADVISORS work on this task. COMMUNITY MEMBERS are observers.

   - Tell ADVISORS they have five minutes to assemble their construction pieces. Their GOAL is to construct the highest structure possible with the materials they have in their possession.

   - After five minutes, stop the groups. Measure and compare the heights of their structures. Write the height of each structure next to the name of the group on the flipchart.

   Situation 2

   - GOAL is the same - to build the tallest structure possible with the resources available.

   - ADVISORS plan how to build the structure. Ask COMMUNITY MEMBERS to move to another room while ADVISORS plan how to build the highest structure possible with the resources available. Allow five minutes for planning. Then call the COMMUNITY MEMBERS back to the training area.

   - Tell COMMUNITY MEMBERS and ADVISORS that they have five minutes to build their structures. ADVISORS must tell COMMUNITY MEMBERS how to assemble the pieces. **ADVISORS cannot touch the building materials.**

   - After five minutes, stop the groups and measure the heights of their structures. Again, record the heights on the flipchart next to the name of each group.

   Situation 3

   - GOAL is the same - to build the tallest structure possible with the resources available.

   - ADVISORS and COMMUNITY MEMBERS work together to plan and construct their structures.

   - Ask ADVISORS and COMMUNITY MEMBERS to plan what to build and how to build it with the materials they have.

- Allow five minutes for planning and five minutes for building the structures.

- Stop the groups after five minutes of building and again measure and record the heights of their structures on the flipchart.

5. Discussion: Compare the results of the three situations. Situation 3 should have given the most successful results.

   Ask the following questions to promote discussion:

   - What happened in Situation 1? (Working alone without coordination)

     Possible responses:
     - No planning
     - Few resources (building materials)
     - No agreement about how to use resources to achieve the goal
     - Confusion
     - Results were disappointing

   - What happened in Situation 2? (COMMUNITY carrying out ADVISOR'S plan)

     Possible responses:
     - ADVISORS had a plan but they did not include the COMMUNITY in the planning process
     - ADVISORS had difficulty explaining their plan to the COMMUNITY MEMBERS
     - COMMUNITY MEMBERS were confused

   - COMMUNITY MEMBERS: How did you feel during Situation 2?

     Possible responses:
     - Confused
     - Did not understand the instructions given
     - ADVISORS did not explain what they wanted

   - ADVISORS: How did you feel during Situation 2?

     Possible responses:
     - Frustrated
     - COMMUNITY did not follow instructions
     - Difficult to explain what we wanted without showing them directly how to assemble the pieces

- Why did Situation 3 give the best results? (ADVISORS and COMMUNITY working together)

  Possible responses:
  - More resources were available because ADVISORS and COMMUNITY MEMBERS contributed their materials
  - Everyone understood the plan and worked hard to build the structure
  - ADVISORS and COMMUNITY planned and worked together

- Did the groups have any problems in Situation 3 that they did not have during the first two work situations? If yes, what were the problems?

  Possible Responses:
  - Difficulty agreeing on a plan
  - Needed more time to plan
  - Confusion during the construction

6. Ask trainees: "If our goal had been to improve the nutrition of women and young children, instead of building the highest structure, which of the three work situations would have given the best results? Why?"

   Answer: Situation 3, in which ADVISORS and COMMUNITY MEMBERS worked together, should give the best results.

   Reasons: Active participation of COMMUNITY MEMBERS is necessary if nutrition activities are to have the desired result.

   COMMUNITY MEMBERS are more likely to participate in activities if they have had the chance to help plan them.

   Activities and programs planned with active COMMUNITY involvement take the priorities, felt needs and abilities of the target population into consideration. Activities planned by outsiders often fail to give adequate attention to these important considerations.

   When ADVISORS and COMMUNITY MEMBERS plan and work together, they share common goals and a common understanding of the steps they have decided to take to reach those goals.

7. Remind trainees that it is easy to talk about involving COMMUNITY MEMBERS in nutrition activities. It is much more difficult to achieve true COMMUNITY participation in the planning and implementation of those activities.

   Ask trainees to brainstorm answers to the following question: "What conditions are necessary for active COMMUNITY participation in nutrition programs?"

   Possible responses:
   - ADVISORS must be willing to work with members of the COMMUNITY
   - COMMUNITY MEMBERS must be interested in solving the problem of malnutrition and child health
   - Dialogue/discussion
   - Time/patience
   - Support from COMMUNITY leaders
   - ADVISORS who are facilitators, not dictators
   - Etc.

8. Summary: Review the following points with trainees.

   - COMMUNITY participation in the planning and implementation of nutrition activities leads to the COMMUNITY'S active participation and ownership of those activities.

   - Activities planned by COMMUNITY MEMBERS are more likely to respond to their priorities, felt needs and resources. COMMUNITY-planned activities are generally more appropriate and acceptable to the COMMUNITY than those planned by outside ADVISORS.

   - The role of ADVISORS and project managers is to promote active COMMUNITY involvement in all stages of planning, implementation and evaluation of nutrition activities.

   - ADVISORS should act as facilitators, not dictators. They should work with the COMMUNITY to identify their most pressing problems and ways to solve them using available material and human resources.

UNIT 2

FINDING THE CAUSES OF MALNUTRITION

SESSION 1: Conducting a Community Nutrition Mini-Survey

SESSION 2: Analyzing Community Nutrition Information

SESSION 3: A Profile of Malnutrition in the Community

UNIT OVERVIEW

The nutrition mini-survey in this unit is a training exercise that takes trainees into the community to practice new skills in nutrition assessment and problem solving. It focuses attention on the causes of malnutrition discussed in this module and provides trainees with a basic list of questions that can be used, both during and after training, to find out more about the specific factors causing malnutrition in individual homes.

In Session 1, trainees prepare for and conduct the nutrition mini-survey. Then trainee teams go into the community to interview 7-10 families each.

In Session 2, teams compile and present the information collected in the household interviews, constructing a general description of the nutrition status, feeding habits, fertility patterns and foods available in the homes of families interviewed.

Session 3 focuses trainee attention on the malnourished children identified during the survey. Trainees analyze the factors that may be causing malnutrition and present their recommendations for improving the nutrition and health status of each child.

This mini-survey is a training exercise; it is not a scientific research study. This means that the survey findings describe the situation of the families interviewed; we do not know and cannot claim that the survey findings are "representative" of conditions in all of the households in the community.

SESSION 1: CONDUCTING A COMMUNITY NUTRITION MINI-SURVEY

Purpose:

Trainees collect information from individual households about the nutrition status of children 0-5 years, infant feeding habits, family size and resources and illnesses that might complicate nutrition status.

Time: 1 1/2 hours preparation, 3-4 hours field work

Materials:

- Handout - "Nutrition Mini-Survey" (one pretested questionnaire for each trainee plus enough so that each survey team has several more than you expect them to fill out.)
- Growth assessment equipment (arm circumference tape)
- Pencils
- Map of the survey area

Preparation:

- Adapt, pretest and produce sufficient copies of the questionnaire.
- Advise and seek consent of local officials for survey work in the community.
- Find out from local health workers and leaders where the community survey teams are likely to find malnourished children.
- Assign teams to different areas of the community or specific households.

Steps:

1. Briefly review with trainees the most common causes of malnutrition in women and children.

2. Tell trainees that in this session, they will investigate the problem of malnutrition in the community and the causes of malnutrition in individual families by carrying out a community survey.

3. Pass out the community nutrition questionnaire and review each of the questions with the trainees.

4. Divide trainees into pairs (2) for role play exercise below:

   Role Play Situation: A mother (trainee #1) is busy working in her home when the field worker (trainee #2) comes to ask her questions about her children. The mother has never met the worker before so she is hesitant to answer her questions. The worker asks each of the questions on the questionnaire. The mother should imagine herself in the position of a real mother. For example, if there are questions she thinks a real woman in the village would not understand, she should pretend not to understand. The worker then has to try to help her understand without answering the question for her. There will also be questions that villagers may not answer truthfully or may not want to answer. After completing the questionnaire, the trainees should switch roles and repeat the role play.

5. Bring all of the trainees back to the large group. Ask them if they had problems with any of the questions or if they anticipate problems. If necessary, make changes in words or the way a question is asked to improve its clarity. Be careful not to change the meaning of the questions.

6. Other activities that will help trainees prepare for the mini-survey:

   - Ask trainees to list the steps a team takes when meeting and interviewing a family for the first time.
   - Ask several trainees to role play the initial meeting between the mother and the field worker. Focus the group's attention on how the field worker explains the purpose of the interview.

7. Divide the group into survey teams of 3-4 trainees each. Explain their areas assigned, using a map or diagram of the community. Make sure they understand how many families they should interview (7-10), and when you expect them back at the training site. Make sure survey teams know where they can refer families for assistance and health care.

8. During the remainder of this session, the teams work in the community to complete interviews with (7-10) families each. Trainers should accompany survey teams if possible.

Note: In this exercise, it is important for each team to interview at least two or three households that have sick or malnourished children. In areas where few children are malnourished, you may wish to substitute a clinic exercise for the community study. The same questionnaire can be used in either situation.

Questionnaire # ______ Team # ______ Date ______

NUTRITION MINI - SURVEY
Sample Household Questionnaire

Complete one questionnaire for each family. (In polygamous situations complete one for each woman and her children under 5 years.)

Name of Mother ____________________
Age of Mother ______
Name of Father ____________________
Person Interviewed ________________
Relationship to Mother ____________

CHILD HEALTH: Answer the questions on the next page for each child under 5 years in this family. Enter the information for the youngest child in column 1, the second youngest in column 2, etc.

HANDOUT

	Child 1	Child 2	Child 3
Name			
Age			
Nutrition Status (arm circumference, weight for age, etc.)			
Illnesses during past 2 weeks? Cause? Treatment?			
Feeding Habits: What did the child eat yesterday? Place an **X** by the foods mentioned. A. Breast milk			
B. Cereals, Grains, Roots			
C. Legumes, Meat, Fish, Eggs, Milk			
D. Vegetables, Fruit			
Immunization: Place an **X** next to the vaccines that the child has taken Measles BCG Polio 1 2 3 DPT 1 2 3			

MATERNAL HEALTH AND FAMILY PLANNING

Total # live births ____ = # Living Children ____ +
# Dead Children ____

Give ages and causes of death in children who have died

____

Is the woman currently pregnant? _____ breastfeeding? _____

Is the woman (or couple) currently using a family planning method? __________ If yes, which method? ________________
If no, is the woman interested in family planning? __________

Does the woman show signs of anemia? __________
(pale mouth, lips, conjunctiva)

FAMILY INCOME AND FOOD PRODUCTION

How many people live in this household? ______

What are the sources of income for the household?

____

What crops were grown last year?

____

Does the food grown by the family last the entire year? _____ If no, which months of the year does the family run short of food? ______________________________

What animals does the family raise to eat or sell?

____

OTHER QUESTIONS TO ASK ABOUT THE FAMILY

Does the family have a latrine? ___ If yes, is it used? ___

Where does the family get water for drinking? ________
(source) How far is the water from the house? ________

Is anyone in the family sick with tuberculosis? ________

QUESTIONS FOR THE FIELDWORKER: Survey teams should answer the following questions for **all families with children who are malnourished.**

What do you think are the most important causes of malnutrition in this household?____________________________

____

What would you investigate further? ____________________

____

What action did you recommend to this family? ___________

____

SESSION 2: ANALYZING COMMUNITY NUTRITION INFORMATION

Purpose:

Trainees will organize and present community nutrition information to answer general questions about the families they interviewed in Session 1.

Time: 2 hours

Materials:

- Charts
- Handout - "Questions About Your Sample"
- Newsprint
- Marking pens

Steps:

1. Ask survey teams to make general comments about their experience interviewing families. How many families did they interview? Where or what part of the community did they visit? Were people friendly?

2. Pass out the Handout - "Questions About Your Sample." Tell teams you would now like them to use the questionnaires from their household interviews to answer the questions on this handout. Several charts have been included on the handout to make it easier for teams to combine information about their families. You may want to complete one of the charts with the group to explain how the charts are to be used. Teams should be prepared to present their answers to the group.

3. Coordinate the presentation of survey findings by each team of trainees. Write each team's answers to the specific questions on a wall version of the handout. At the end of the presentations, show the combined totals for all of the teams.

   Example:

	Team 1	Team 2	Team 3	Total
1. How many families did you interview?	11	9	12	42
2. How many children under 5 years of age?	19	15	24	58

4. Calculate percentages from the groups' totals for several of the questions.

   Example:

   # 3. Malnourished children as a percent of the total number of children under 5 years

   #11. Women with anemia as a percent of the total number of women

   #12. Women using modern family planning methods as a percent of the total number of women 15-49 years or total number of eligible couples

5. Summarize group presentations, and ask participants to comment on the similarities and differences in their findings. If there are obvious common problems that can be identified, call the group's attention to them.

6. Ask survey teams to decide: What information would they present to the community leaders as follow-up to this survey? How would they present it? (Allow 10 minutes.) Ask survey teams to describe their plans for providing feedback to the community and discuss.

7. Go on to Session 3.

HANDOUT

QUESTIONS ABOUT YOUR SAMPLE

1. How many families did you interview? ______

2. How many children under five years were in those families? ______

3. How many children were found to be malnourished?
   (Total Red and Yellow) ______
   Severely malnourished? (Red) ______
   Moderately malnourished? (Yellow) ______

4. How many of the total children had been sick during the past two weeks (month)? ______

5. Complete the chart below with the illnesses reported, the causes given by the respondents and the treatment received.

Illness	Number Reporting	Causes	Treatment Reported

6. How many children were being fed a mix of foods that could be considered adequate according to their age?

Guidelines (depends on national guidelines)		Total No. children this age group	How many followed guidelines?	How many did not follow guidelines?
0-5 months	Breast milk only (A)			
6 months - 2 years	Breast milk (A) Energy (B) Body-building (C) Protective (D)			

Guidelines (depends on national guidelines)		Total No. children this age group	How many followed guidelines?	How many did not follow guidelines?
2-3 (5) years	Energy (B) Body-building (C) Protective (D) **TOTAL**			

7. How many children had no immunizations? ______
How many children had three or more immunizations? ______

8. How many women were interviewed? ______

9. How many women interviewed are currently pregnant? ______

10. How many women interviewed are currently breastfeeding? ______

11. How many women showed signs of anemia? ______

12. How many women/couples interviewed are using a family planning method? ______

13. How many of the other women/couples were interested in using family planning? ______

14. What are the crops grown by most of the families interviewed? ______________________

15. How many families reported that their production did not meet the year's food requirements? ______
When is the food shortage? ______________________

16. What animals do families raise? ______________________

17. How many families have latrines? ______

18. Sources of water for families?

Well	Open Stream/ River	Tapped Stream	Pipe	Standing Water
____	____	____	____	____

19. How many families reported tuberculosis among family members? ______

SESSION 3: A PROFILE OF MALNUTRITION IN THE COMMUNITY

Purpose:

Trainees use the information collected about malnourished children in the mini-survey to identify the primary causes of moderate and severe malnutrition in the community.

Time: 1 1/2 hours

Materials:

- Newsprint and marking pens or chalkboard and chalk
- Large wall chart - "A Profile of Malnutrition in the Community"

Preparation:

Prior to the session, attach several sheets of newsprint to the wall and prepare a chart like the example provided "A Profile of Malnutrition in the Community."

Steps:

1. Ask each survey team to present information only on the malnourished children they identified in the mini-survey. As the team reports, write the corresponding information for each child on the wall chart.

2. When a team comes to its diagnosis of the causes of malnutrition and a plan of action for each child, ask the group if they would agree with the team's assessment. If they do not agree, ask the team to provide more information from their observations and discussions in the home, justifying their conclusions.

3. When all of the teams have reported, you will have a chart that can be used for comparing the characteristics of malnourished children. Ask the group to generalize about the characteristics of malnutrition in the community from the information on the chart (i.e., age most affected, family size, illnesses experienced, use of health services, food production, etc.).

4. Tell trainees that the survey they conducted was a mini-survey. Because we have not followed strict sampling techniques, we cannot say that our findings are representative of the entire community, but only of those families we interviewed.

5. Mini-surveys are often helpful during the planning and implementation of action projects. They give project managers a better understanding of the lives of the

people their projects assist. Results of mini-surveys can also be used to determine educational messages and to find out a community's preferences or expectations for services.

6. Summary: Review the types of questions asked in the survey. They focused on the:

   - nutritional status of the child;
   - the feeding of the child;
   - illnesses and common treatments;
   - immunization status;
   - the size of the family, child survival and use of family planning;
   - the food resources of the family and whether or not their production is enough to meet their needs; and
   - other factors that might affect nutrition of children (i.e., tuberculosis, sanitation, etc.).

There are many other questions we could ask about the problems and resources of individual families and the community. The questions answered during this exercise are a beginning. They are important because they focus on some of the most common causes of malnutrition and because their answers can be used by managers to plan for individual and community action.

WALL CHART

A PROFILE OF COMMUNITY NUTRITION PROBLEMS

Answer for the malnourished child								Answer for the family of the malnourished child													
		Feeding Habits			Illness (Child)			Child Spacing			Food/Animal Production						Other			Team Assessment	
Age of Malnourished Child	Nutrition Status of Malnourished Child	Adequate	Inadequate	# of meals per day	Names of Illness	Treatment	# Immunizations	# Births	# Living	Family Planning?							Latrine	Water	Tuberculosis	Causes of Malnutrition	Plan of Action

UNIT 3

DECIDING WHAT TO DO

SESSION 1: Visits to On-going Nutrition Projects
SESSION 2: Case Studies/Panel Discussion

SESSION 1: VISITS TO ON-GOING NUTRITION PROJECTS

Purpose:

To give trainees the opportunity to observe the activities of an on-going community nutrition project. Field visits can also include opportunities for trainees to practice new growth monitoring and nutrition counseling skills.

Time: 2 hours for project visit plus travel time

Materials:

- Vehicles to transport trainees to and from field site
- Handout - "Questions to Ask About Nutrition Projects"

Steps:

Several weeks before the field visit:

1. Identify and visit on-going projects with regular community nutrition activities. Discuss the possibility of a study visit to the projects with each of the managers. Study visits require a great deal of preparation both by the project manager and by the trainer. Make sure that managers are willing to prepare and coordinate the study visit with you.

2. Select the projects that you will visit during the training. It is best to select projects with daily activities, or those that can schedule activities on the day you plan to visit. Activities like growth monitoring, education sessions and immunization clinics are preferable because trainees can use newly acquired skills to participate in them.

3. Decide how many trainees will visit a project at the same time. In some cases, it is wise to divide trainees into groups of 5-6 persons. In this case, each small group visits only one project. If a large group visits a project, the group should be divided into small groups that then rotate through several activities during the visit.

   In one workshop visit to a Maternal Child Nutrition Clinic, small groups rotated through the following activities:

   - Observation of nutrition education sessions with clinic clients
   - Counseling mothers of malnourished children and children with diarrhea (Practice)
   - Weighing and charting the weights of children (Practice)

- A meeting with clinic staff to discuss the services clients receive and the training of community nutrition and family planning workers
- A meeting with community nutrition and family planning workers
- A meeting with the project manager and community leaders to discuss the community's role in the project

4. Decide how the visit will be organized and the results you expect. Prepare a schedule for the visit with the project manager.

The day before the visit:

1. Distribute and review the questions on the Handout - "Questions to Ask About Nutrition Projects," with trainees. During the field visit, they will be expected to learn as much about the on-going project as they can.

2. Make sure transportation for the following day has been confirmed.

The day of the visit:

1. Distribute the schedule for the day and divide the trainees into small groups if they will be rotating to different activities in the project area. Assign a trainer to each small group. Make sure everyone understands the visit's schedule and objectives.

2. Upon arrival at the project site, review the schedule with the manager, make any changes that might be necessary and supervise trainee activities.

After the visit:

1. Discuss their observations with the trainees. This can be done either at the end of the visit, so that project personnel can also participate, or it can be done once the group has returned to the training facility. If groups have visited different projects, this discussion should be preceded by reports from each of the groups about their experiences and observations during the project visits.

2. Use the questions on the Handout - "Questions to Ask About Nutrition Projects" to guide the discussion. Ask trainees to discuss what they liked and did not like about the project. How would they change the project?

HANDOUT

QUESTIONS TO ASK ABOUT NUTRITION PROJECTS

Name and Location of Project ______________________________

Implementing Organization ______________________________

When did the Project begin? ______________________________

Project Beneficiaries: Describe the population served by this project. How many people are served?

Objectives: What results does the project hope to achieve?

Activities: What are the specific project activities? How often are they carried out? By whom?

Staff: How many staff members work on this project? What are their titles/professional training? Describe the work of each staff member.

Volunteers: Does the project work with volunteers? If yes, how are they selected, trained? How many volunteer workers participate in the project? Are volunteers paid or given other incentives for their work? What is the job of the volunteers?

Training: If project activities include training for community members, staff or volunteers describe the training. (length? content? when? who conducts training?)

Community Involvement: How has the community been involved in the planning and implementation of the project? Is improving nutrition a "community-felt need"?

Project Resources: What are the principal resources used by the project? What are the sources of these resources? What is the annual budget for the project? Does the project receive support from another organization or donor?

Recordkeeping and Reporting: Describe the recordkeeping system used by the project? What information is collected? By whom is it collected? Are special forms used? How often are reports submitted?

Evaluation: How is the project evaluated? Is the community involved in the project evaluation?

Problems: What specific problems has the organization/community encountered in the implementation of the project? How have they solved these problems?

Other questions about the project: ____________________

____

____

____

____

SESSION 2: CASE STUDIES/PANEL DISCUSSION

Purpose:

To expose trainees to a variety of community-based nutrition activities and the management issues associated with the planning, implementation and evaluation of these activities.

Materials:

- Handout - "Questions to Ask About Nutrition Projects"
- Chairs and table for materials
- Microphone if the group is large
- Slide projector
- Flipchart and marking pens

Steps:

Several weeks before the workshop:

1. Identify 2-3 on-going projects with successful community nutrition activities.

2. Invite representatives from these projects to participate in a panel discussion during your workshop. Ask them to prepare a 15-minute presentation about their projects. They should include information about the development, present activities and management of the project's nutrition activities.

3. Give each of the panelists a copy of the Handout - "Questions To Ask About Nutrition Projects." Explain that trainees will be asked to answer these questions about each of the projects discussed.

4. Encourage panelists to use slides and other visual aids to illustrate their case studies.

The day before the panel discussion:

1. Prepare trainees for the session by explaining that managers often decide what nutrition activities to carry out and how to organize them by visiting and collecting information from managers of on-going projects. Trainees will have the opportunity to do this in the panel discussion planned for the following day.

2. Review the "Questions to Ask About Nutrition Projects" with the trainees.

On the day of the case study presentations:

1. Introduce the guest speakers. Write their names and the organizations they represent on the flipchart.

2. Remind trainees that they should listen for information during the case studies that will help them answer the questions on the Handout - "Questions to Ask About Nutrition Projects."

3. Make sure that each presentation is no more than 15 minutes long. Trainees will have difficulty concentrating if presentations are too long!

4. After each case study is presented, encourage trainees to ask any questions they have about the project, its activities, staff, training, funding, etc.

5. Speakers may also want to ask each other about specific aspects of their projects. It is important that they tell trainees about the problems they have faced in their projects and how they have solved them.

Following the case study presentations:

1. Discuss the similarities and differences in the projects presented. Focus on similarities and differences in:

   - Project activities
   - Size and characteristics of the target population
   - Community involvement
   - Staffing
   - Training
   - Resources
   - Source of funding

2. Summarize and ask trainees to think about the factors that determine project activities and how these activities are managed. Use a diagram like this to record trainee responses:

FACTORS
- Causes/severity of malnutrition
- Resources available
- Manager's knowledge, experience and interest
- Community's knowledge, experience and interest
- Organization policy
- Political pressures
- Etc.

THAT DETERMINE →

PROJECT
ACTIVITIES
AND
MANAGEMENT

UNIT 4

PLANNING NUTRITION ACTION PROJECTS

SESSION 1: Describing the Problem

SESSION 2: Writing Project Goals and Objectives

SESSION 3: Choosing Project Activities

SESSION 4: Developing a Project Work Plan

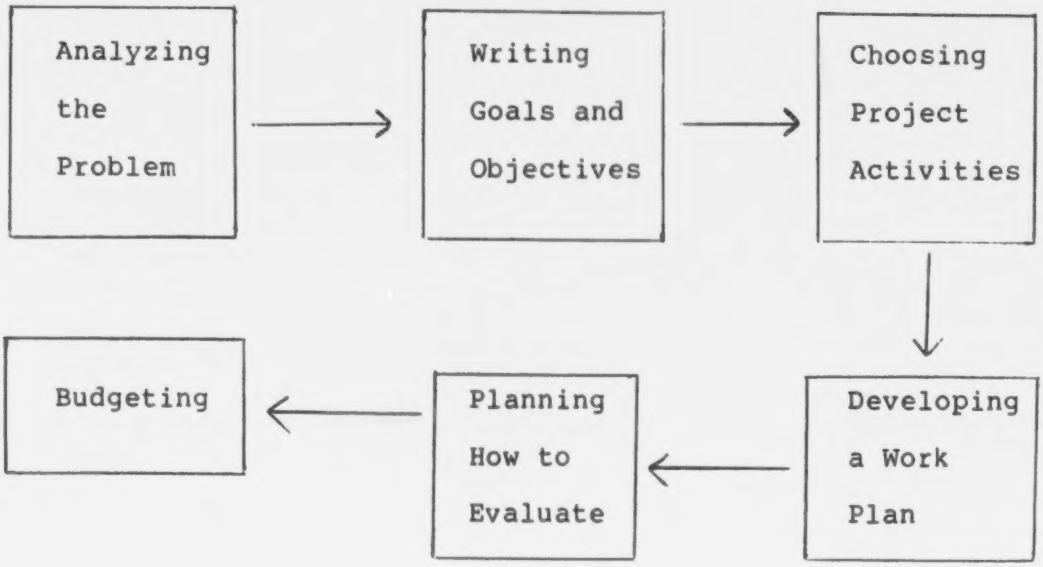
SESSION 5: Planning How to Evaluate

SESSION 6: Preparing a Budget

Note: Introduce this unit on Planning Nutrition Action Projects by reviewing the chart on the next page. This chart can be made into a handout or it can be drawn on the flipchart or chalkboard.

The steps in project planning are the same whether you are planning a project or activity with one community or with many communities, or whether you are requesting approval and funding for these activities from your organization or funding from outside donor agencies.

PROJECT PLANNING


Analyzing the Problem
Writing Goals and Objectives
Choosing Project Activities
Developing a Work Plan
Planning How to Evaluate
Budgeting

SESSION 1: DESCRIBING THE PROBLEM

Purpose:

Trainees practice analyzing and writing problem statements for their own projects.

Time: 1-2 hours

Materials:

- Trainer's Reference - "Sample Problem Statements"
- Handout - "Guidelines for a Problem Statement"
- Flipchart and marking pens

Steps:

1. Introduction: The first step when planning a community project is to find out as much as possible about the problem your project is meant to solve. A project proposal requires a concise problem statement that describes:

    - The type of nutrition problem
    - Who is affected (characteristics)
    - How many people are affected
    - What are the consequences
    - What are the principal causes of the malnutrition (focus on those causes that your project will address)
    - What programs are already addressing the problems described

2. Brainstorm: Ask trainees to list possible sources of information about the problem of malnutrition in their communities. They include:

    - Health workers, extension workers
    - National or regional nutrition surveys
    - Census data
    - Families of well- and malnourished children
    - Community surveys
    - One's own experiences and observation
    - Community leaders

    (If trainees conducted a community mini-survey, discuss how information from the survey might be included in a problem statement.)

3. Review two problem statements: One is clear and complete, the other vague and incomplete. (Examples attached.)

    Ask participants to comment on each of the statements. Do they include the information mentioned in 1. above? If not, what information should be added?

4. Distribute the Handout - "Guidelines for a Problem Statement" and review.

5. Ask trainees to write a problem statement based on a problem that their own nutrition project might address. Encourage them to be as detailed but concise as possible. (Allow 15-20 minutes.)

6. When they finish, divide the group into pairs (two persons). Each trainee reads his/her problem statement to the other. Together they check their statements and revise them to make sure they answer the following questions:

   - What is the nutrition problem?
   - Whom does the problem affect/how many?
   - What are the consequences?
   - What are the principal causes of malnutrition?
   - What programs are currently addressing this problem? (Allow 15-20 minutes.)

7. Reassemble the group. Ask three or four trainees to read their statements. Trainees may wish to make suggestions for additional information that could be included in each problem statement.

8. Summarize: Review the information to be included in the problem statement. Proceed to the next session.

   Note: Trainees may not have all the information they need to write a complete problem statement during the workshop. Make sure they list the information they will include in the final statement and how they plan to collect it once they return to their regions.

SAMPLE PROBLEM STATEMENTS

A Vague Problem Statement

People in the Kigondo District are very poor. Many work on plantations or in the capital city so that their families will have enough to eat. Children in the district are always small and thin because their mothers are ignorant and do not feed them properly. Last year 15 children died when measles broke out. Hygiene in the district is very poor - children are always dirty because water is scarce.

A Clear Problem Statement

In the Kigondo District there are 25,000 people living in the subdistricts. The region is hilly and there is little water. Families raise sheep and goats and they grow corn during the rainy season. A study conducted by the Ministry of Health showed that 60 percent of the children under five years old in the district are malnourished - 5 percent suffer from severe malnutrition. This high level of malnutrition results in high infant mortality (180 infant deaths per 1,000 live births) and constant sickness among young children. Women also suffer from chronic anemia as a result of repeated pregnancies and inadequate diets.

Infant feeding habits and lack of food during certain times of the year are the principal causes of malnutrition in Kigondo District. All children are breastfed until at least two years of age, but it is common not to feed children foods other than breast milk until they are about one year old. Because mothers are busy tending their animals or working in the fields, families generally eat twice each day. Young children are also fed only twice each day, even though they need more frequent feeding. From May to August, families often resort to eating starchy roots to survive. This is the time just before the harvest when food stores from the last year have been finished.

There is a health center in the district and a small health post in each subdistrict. Health workers are fully occupied with diagnosis and treatment of illnesses; they have little training in health promotion. Extension workers from the Ministry of Agriculture have reported some success working with mothers clubs on home gardening and nutrition. However, there are only four extension workers to serve the entire district.

GUIDELINES FOR THE PROBLEM STATEMENT

When describing the problem to be addressed by your project, consider the following suggestions:

- Provide a brief discussion of the overall context of the problem.

- Focus quickly on the specific problems and needs your project will address.

- Break down a large problem into smaller needs that can be met by your project.

- Provide proof of the problem using examples, survey results, statistics and/or information gathered by observation and interviews.

- Describe problems and needs in such a way that the solutions you propose appear to be the most logical approach.

SESSION 2: WRITING PROJECT GOALS AND OBJECTIVES

Purpose:

Trainees practice analyzing and writing measurable goals and objectives for their projects.

Time: 1 hour

Materials:

- Handout - "Writing Goals and Objectives"
- Trainer's Reference - "Clear and Unclear Objectives"
- Flipchart and marking pens

Steps:

1. Define "goals" and "objectives" as statements about the desired or expected results of our projects.

   Ask trainers: "Why is it important to describe the results we hope to achieve?"

   - So that everyone involved understands the desired results of his/her work
   - For guidance in the planning of activities and allocation of resources to produce results
   - For monitoring and evaluating progress

2. Distribute the Handout - "Writing Goals and Objectives" and review with trainees.

3. Write several objectives on the flipchart. Use the objectives provided on the trainer's reference or develop your own. Half of the objectives should meet the conditions for SMART objectives, the other half should not.

4. Ask trainees to decide which objectives would be most useful to program managers. Why?

   Ask trainees to state whether each of the objectives is SMART or not SMART. Modify one or two of the unclear objectives with trainees, making them SMART.

5. Ask trainees to write one goal and one objective for the first year of their projects. Read three or four of their objectives to the group. Compare them to the criteria for SMART objectives described on the handout. The group can be asked to help revise objectives that are not SMART.

6. Ask trainees to finish writing their project objectives. Trainers should be available to guide them.

WRITING GOALS AND OBJECTIVES

Goals

A Goal briefly describes what you expect the project setting to be like after your project has solved the problem described earlier.

A Goal must be realistic. Do not state that your project will accomplish more than it possibly can.

> Example:
>
> "To improve the nutrition status of 500 children in Kigondo District by the end of the two-year project."

Objectives

Objectives describe the series of accomplishments that will lead to achievement of your goal.

Objectives are related to the specific causes of malnutrition and the needs that your project will address.

> Examples:
>
> "To train 30 community health workers in nutrition prevention by the end of year one."
>
> "To monitor the nutrition status of at least 2,000 children monthly during the life of the project."
>
> "To provide information about breastfeeding, improved weaning foods and family planning to at least 1,000 families in Kigondo District by the end of the project."

Objectives should be stated in clear, measurable terms. Writing clear objectives makes it easier to plan and implement activities to reach them. Clear objectives also make it easier to monitor progress and evaluate the success of your project.

Objectives should be S M A R T:

Specific
Measurable
Area-specific
Realistic
Time-bound

Specific: Is the objective clear in regard to what will be changed, who will be involved, how, when and where?

Measurable: Does the objective provide a target which can be measured? Does it state how many people (or what percentage of a population) will be reached? How much of an increase (in the number of family planning users, number of children vaccinated, etc.) is desired?

Area-specific: Does the objective clearly indicate the area or population to be included in the project? Does it define project activities and beneficiaries by village, sex, age or other characteristics?

Realistic: Do the people you plan to involve in the project (beneficiaries, staff, community leaders) need and want to be involved? Can you expect to attain the levels of involvement and level of change reflected in each objective? If you expect too great a change in too short a time, you are risking failure. If you propose too little change over too long a time, your project may not be worthwhile to potential donors.

Time-bound: Does the objective indicate the exact period of time during which the objective will be accomplished? It is often helpful to set targets for specific periods of your project - for example, by quarters or for the halfway point in the project.

CLEAR AND UNCLEAR OBJECTIVES

Examples:

1. To improve the lives of women and their families in Belu District. **(unclear)**
2. To increase the use of contraceptives in Tokara Village from the present 10 percent of eligible couples to 20 percent of eligible couples by the end of the first year. **(clear)**
3. To improve the nutrition status of 50 malnourished children in Kiambu location by June 1986. **(clear)**
4. To conduct monthly growth monitoring. **(unclear)**
5. To teach women about nutrition and family planning. **(unclear)**
6. By June 1985, to train 100 women in Santo Domingo location to (1) prepare and give oral rehydration solution for treatment of diarrhea and (2) prepare improved weaning foods using locally available foods. **(clear)**
7. To vaccinate all the children in San Pedro Village. **(unclear)**
8. To vaccinate all children under one year old in San Pedro village against measles, tuberculosis, polio and DPT during the first year of the project. **(clear)**

SESSION 3: CHOOSING PROJECT ACTIVITIES

Purpose:

In this session, trainees identify different activities that might be chosen to reach the same objectives. They then analyze the factors that affect the choice of project activities.

Time: 1/2 hour

Materials:

- Handout - "Factors Affecting Choice of Activities"
- Trainer's Reference - "Choosing Project Activities"
- Flipchart and marking pens

Steps:

1. Introduction: Once you have defined the problems your project will address and the results (goals and objectives) you hope to achieve, you must describe how you will achieve those results. In every case, managers must choose between different activities that could be carried out to achieve their objectives.

2. Identifying alternative approaches: Write the objective below on the flipchart:

   To provide information about breastfeeding, improved weaning foods and family planning to at least 500 families in Kigondo District by the end of year two.

3. Ask trainees: "What are the different activities we might carry out to achieve this objective?"

   Answers might include:

   - Formal classes or presentations in the community
   - Presentations and discussions with mothers who bring their children to a clinic
   - Home visits by health workers
   - Mass distribution of pamphlets or posters
   - Radio programs
   - Etc.

   (Repeat this exercise using other objectives until trainers can list alternative approaches without difficulty.)

   Emphasize that, in all cases, there are many different activities that could be chosen to solve specific problems. It is the job of the manager to decide which activity(ies) are most appropriate under his or her specific circumstances.

4. Factors that influence our choice of activities: Display a large chart like the one on the Handout - "Factors Affecting Choice of Activities." Discuss each of the factors that influence our choice and design of project activities. Use the trainer's reference sheet to guide the discussion. Give examples to illustrate key points.

5. Community involvement: Emphasize the need to define the role that community leaders and project beneficiaries will play in project activities. In nutrition action projects, community members (especially those with malnourished children) should be involved in the planning and the evaluation of activities. If active community participation is part of a project's approach, the following questions should be answered.

   - What level of involvement will community members have in planning and carrying out specific activities? That is, will they:
     - provide services?
     - assist with services?
     - monitor services?
     - use services?
   - Who in the community will be involved?
   - How will they be selected and motivated?

6. Describing activities: It is important to describe activities clearly and in measurable terms.

   Ask trainers to compare the two statements below.

   - Conduct monthly education sessions in the community.
   - Conduct one education session every month in each of 30 villages. Education sessions will be carried out by Community Health Workers with the assistance of the Home Economics Extension Worker. This approach has been chosen because it will allow Community Health Workers and Extension Workers to use their limited time to reach many people in a community meeting.

Write on flipchart

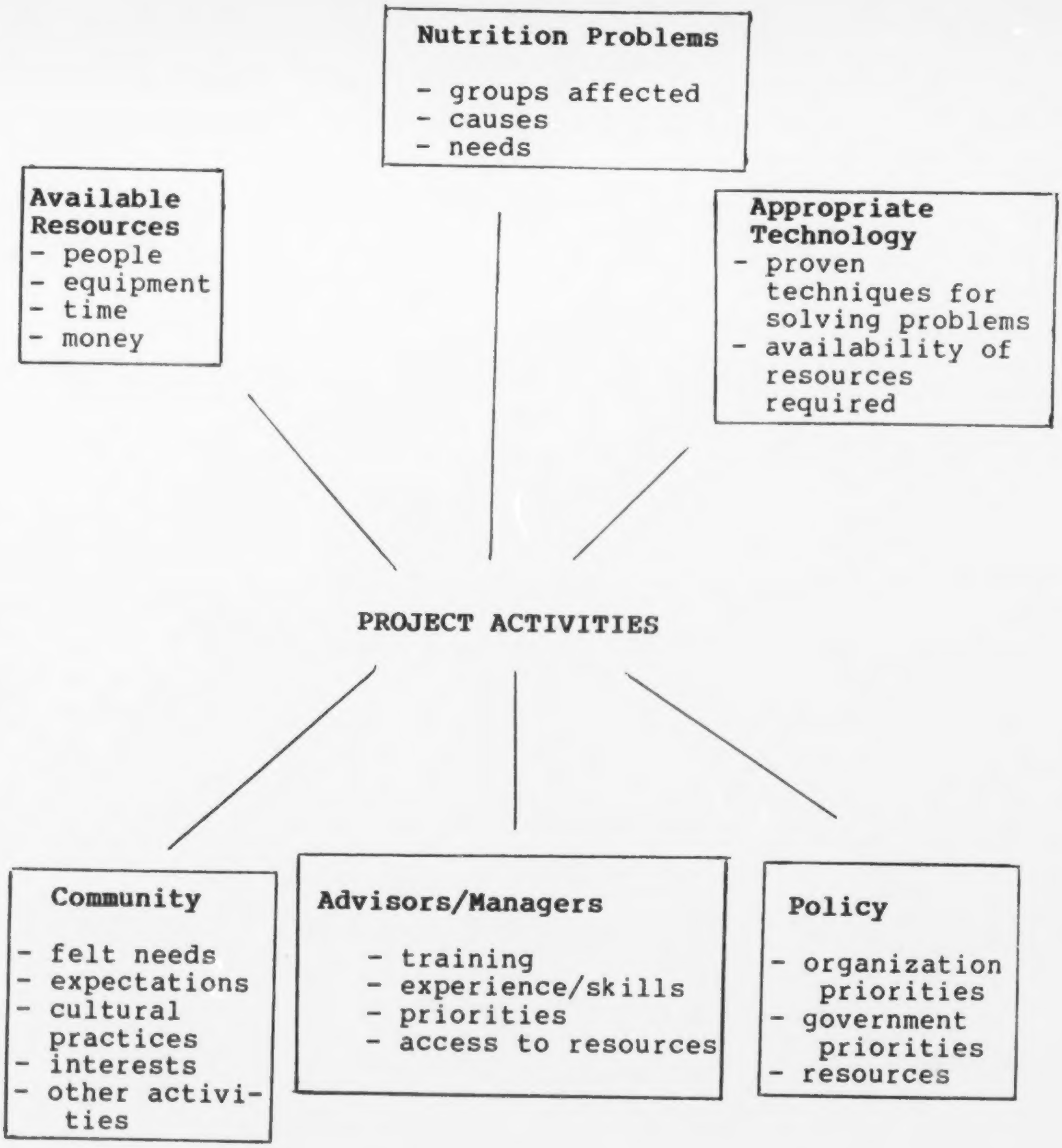
A description of project activities tells us:

What will be done?
Who will do it?
How often?
Why was this approach selected?

7. Practice: Trainees list the activities that their projects will carry out. Ask them to describe one of these activities. When they finish, ask trainees to make sure that their descriptions answer the questions on the flipchart (6.above).

HANDOUT

FACTORS AFFECTING CHOICE OF ACTIVITIES



Nutrition Problems

- groups affected
- causes
- needs

Available Resources

- people
- equipment
- time
- money

Appropriate Technology

- proven techniques for solving problems
- availability of resources required

PROJECT ACTIVITIES

Community

- felt needs
- expectations
- cultural practices
- interests
- other activities

Advisors/Managers

- training
- experience/skills
- priorities
- access to resources

Policy

- organization priorities
- government priorities
- resources

CHOOSING PROJECT ACTIVITIES

Many factors affect our decisions about the activities we develop to address nutrition problems.

Causes of the Nutrition Problem: Activities must address the most important causes of malnutrition. They must also focus on and reach the groups affected by malnutrition. It does little good to begin nutrition education activities in an area of chronic food shortage. Likewise, promotion of home gardens in a food-abundant area may not make good sense.

Technologies for Intervention: These include availability of the techniques, equipment and supplies necessary to improve nutrition. In the case of an oral rehydration therapy program, it would not make sense to plan for distribution of ORS packets in an area where these are not easily available. In this area, an appropriate activity might be to teach families to use available ingredients to make ORS.

Community Characteristics: Community-felt needs, expectations and interests play a part in the design and choice of project activities. Cultural practices and restrictions also affect what services are provided and how they are delivered. For example, where women are not permitted to move freely outside of their own homes, providing education classes at a clinic would not be an appropriate approach to increasing their knowledge. Home visits by female workers might be a more appropriate way to provide information and training to them.

Available Resources: These include people, money and materials that can be applied to solving the nutrition problem as well as time, skills, interests and previous experience. Families, community leaders, managers, organizations and outside donors may all contribute resources.

Advisors/Managers: The managers' training, previous experience and interests will affect the design of project activities. Managers tend to suggest activities that they have conducted or seen conducted successfully. Training, visits to on-going projects and written materials about alternative approaches to solving nutrition problems will increase a manager's knowledge and ability to try new and different solutions.

Policy: All organizations and governments have explicit and implicit policies that can affect project activities. If the Ministry of Agriculture defines its services exclusively as food production and marketing, agriculture workers/home extensionists may not be encouraged nor have access to the resources necessary for conducting growth monitoring. A policy that restricts specific activities in family planning to persons with government certification or special status will also affect which family planning services can be provided and who can provide them.

SESSION 4: DEVELOPING A PROJECT WORK PLAN

Purpose:

Trainees practice listing action steps that must be taken to carry out project activities. They use a **Time/Task Chart** to sequence and schedule action steps.

Time: 1 hour

Materials:

- Handout - "Detailed List of Project Activities"
- Handout - "Time/Task Chart"
- Flipchart and marking pens

Steps:

1. Introduction: Trainees have now completed the following steps in project planning:

   - Describing the problem
   - Writing goals and objectives
   - Choosing activities

   In this session, we will practice developing a work plan and a schedule for completion of project activities.

2. Listing Action Steps: The first step in developing a work plan is to list all of the subactivities or action steps required to carry out our principal activities.

   Write several examples of project activities on the flipchart. Ask trainees to brainstorm the action steps that might be required for each one.

   Example:

   Activity: Conduct monthly education sessions in each of 30 villages

   Action steps:
   - Discuss with community health workers and extension workers the possible addition of nutrition education sessions
   - Determine what mothers already know and what they want to know about maternal/child health and nutrition
   - Develop draft educational materials
   - Pretest, revise and produce educational materials
   - Train health workers to organize and use the materials in monthly community sessions
   - Health workers plan and conduct education sessions
   - Supervise sessions

3. Distribute the Handout - "Detailed List of Project Activities," which includes spaces for activities and action steps.

   Explain that this type of chart can be very useful when developing a detailed work plan.

   Ask trainees to write a potential nutrition project activity in column 1 and then to list all of the steps that must be taken to carry out that activity, in column 2. Review several examples from the group, making sure they are complete.

4. Completing a Time/Task Chart: Once we are sure that all of our project activities and action steps have been listed, it is helpful to organize this information on a Time/Task Chart.

Distribute Handout - "Time/Task Chart." Explain that the chart, once completed, will show the sequence of activities and action steps as well as overall project timing. It also provides a column for identifying the person(s) responsible for each activity/action step.

Demonstrate how to complete the Time/Task Chart using the lists of activities and action steps developed earlier.

Remember:

- Put the activities in a logical sequence.
- Assign beginning and completion dates to activities first.
- Then assign dates to action steps.

A sample chart is included.

5. Project Staffing: The project work plan should also describe the personnel who will work with the project. Once the activities and steps for completing them have been described, project planners must assign responsibility for each activity to specific personnel, volunteers, community committees, etc. Demonstrate on the Time/Task Chart.

   Job descriptions for staff members, volunteers, etc., should briefly describe their responsibilities, as well as the minimum criteria for their selection or assignment to the project. Trainer may wish to provide several sample job descriptions.

6. Using the Time/Task Chart for Project Management: Many project managers use a Time/Task Chart to guide their

work. The chart shows the manager where project activities should be at any time and recalls action that must be taken in the future. In the community, a Time/Task Chart can be used to track progress by drawing a line through completed activities. In this way, everyone can see the progress being made.

HANDOUT

DETAILED LIST OF PROJECT ACTIVITIES

Activity	Action Steps

5. Time/Task Chart

Activity	Action Steps	Months												Persons Reponsible
		1	2	3	4	5	6	7	8	9	10	11	12	
Write all activities and action steps in the sequence they will be carried out.														

SESSION 5: PLANNING HOW TO EVALUATE

Purpose:

In this session, trainees identify critical information required for monitoring and evaluating project progress. They also discuss the methods for collecting this information and its analysis and use by project managers and the community.

Time: 2 hours

Materials:

- Handout - "Planning for Project Evaluation"
- Trainer's Reference - "Common Indicators of Change"
- Flipchart and marking pens

Steps:

1. Introduction: Trainees have now completed the following steps in project planning:

    - Describing the Problem
    - Writing Goals and Objectives
    - Choosing Activities
    - Developing a Work Plan

    In this session, we will discuss planning for evaluation. Evaluation is an on-going activity during project implementation. It is important to plan for evaluation so that the information we need to assess our progress can be collected during project implementation.

2. Distribute the Handout - "Planning for Project Evaluation" and review it point by point.

3. Developing indicators: Write the definition of indicators on the flipchart:

    Indicators are the concrete, observable facts that serve as evidence of project progress.

    The handout gives examples of **indicators** for a nutrition program that includes growth monitoring and immunization activities. Trainers should use other examples of project goals and objectives with trainees to practice deciding on appropriate **indicators**. **Indicators** can be related to completion of activities, to changes in knowledge or practice and to changes in health and nutrition status. The Trainer's Reference - "A List of Common Project Indicators" can be used for these additional activities and made available to trainees for future reference.

4. Collecting information: Ask trainees to **brainstorm** to collect the information they need to monitor and evaluate nutrition activities and results. Refer to the **indicators** identified in 3. above, and ask trainees what information they would need to measure each one and how they might collect that information.

   Discuss:

   - Baseline information collection
   - Client records
   - Worker/clinic reports
   - Summary reports

   Emphasize:

   An important element of the project evaluation plan is a description of the methods for recording and analyzing critical information about project activities and results.

5. Community involvement: Emphasize the importance of community/beneficiary involvement in project evaluation. When deciding on ways to collect and analyze critical project information, managers should describe how community members/project beneficiaries will be involved.

6. Summary: Review the steps for developing an evaluation plan stated on the handout. Put the following key phrases on the flipchart.

   - Review goals, objectives, and activities
   - Select indicators of change
   - List specific information needed to measure indicators
   - Determine who should collect this information and how it will be collected
   - Decide how to analyze and use information
   - Schedule specific monitoring and evaluation activities

PLANNING FOR PROJECT EVALUATION

In the previous sessions, we defined goals and objectives as the specific changes that we expect to occur as a result of a project. We also practiced planning activities that would lead to the accomplishment of these objectives. During project planning, we must also plan how to assess our project's progress once it is underway.

Monitoring

During the course of your projects, you will want to know if you are making progress toward meeting your objectives. By carefully monitoring progress, you will be able to make any necessary changes to keep the project moving forward. Monitoring is on-going evaluation of project activities and results.

Final Evaluation

Likewise, at the end of the project, you will want to determine to what extent the stated objectives have been reached. This end-of-project assessment provides extremely valuable information for future projects you may develop. If all of your project objectives are **SMART** (Specific, Measurable, Area-Specific, Realistic, and Time-Bound), and if you have carefully planned your activities, the task of monitoring progress and evaluating results is not difficult.

Indicators

We measure progress by examining indicators. Indicators are the concrete, observable facts that serve as evidence of our progress.

For example, if one goal of a project is to improve the nutrition and immunization status of malnourished children, in a certain village, and activities related to this include regular growth monitoring sessions at the local health center and monthly mobile immunization clinics, important indicators of progress might include:

- Percent of children with monthly weight gain
- Percent of mothers producing and giving improved weaning foods
- Percent of children classified as moderately and severely malnourished

- Percent of children with complete or incomplete immunizations

When you write project objectives and develop and schedule activities to meet those objectives, it is helpful to be thinking about the indicators you will use to measure progress. By selecting your indicators of change at the beginning of a project, you will be able to establish systems for collecting the data you need to measure progress.

Collecting Information

Information about project indicators can be collected in a variety of ways. These include:

- Client records
- Worker records
- Clinic records
- Interviews with clients, workers, community leaders, etc.
- Special surveys and studies

The indicators mentioned above for the nutrition monitoring program could be measured by:

- keeping a growth card with an immunization record for each child weighed;
- keeping a daily clinic record to collect information about the nutrition status and weight gain of all participating children;
- keeping a record of all immunizations given during mobile clinics; and
- compiling a monthly report that summarizes information on all children participating in the growth monitoring activity during the month (i.e., nutrition status, immunization received; etc.).

Evaluation Activities

Information collected about project progress and results should be compiled and analyzed regularly. Managers must decide **who** will compile and analyze project information, **when** it will be analyzed, and **how** it will be used. Providing **feedback** to workers and planners is an important aspect of project evaluation. Involving beneficiaries and community leaders in the evaluation of project activities will enhance evaluation results and guarantee that steps are taken to correct problems at the community level.

Summary

The steps for developing a project evaluation plan are:

1. Review the project goals, objectives and activities. Make sure they are stated in measurable terms.
2. Decide which **indicators of change** (actions, concrete facts and observable evidence) you will need to examine in order to know if you are progressing toward your goals and objectives.
3. List the specific information you need to collect before, during and at the end of your project to confirm that change has occurred.
4. Determine who will collect the information and what methods will be used. Develop records and reporting forms.
5. Decide how information will be analyzed and used for monitoring and evaluation.
6. Schedule specific monitoring and evaluation activities (developing and testing forms, reporting, supervision visits, surveys, meetings, etc.).

COMMON INDICATORS OF CHANGE

Nutrition Status	- number or percent of malnourished children in project area - number or percent of children without weight gain (usually collected monthly)
Nutrition-related Practices (compare periodically to baseline data)	- number or percent of children under five years who are breastfed until one year - number or percent of children between six months and two years who are fed with improved weaning foods - number or percent of children under five years who are fully immunized - number or percent of children treated with ORS during episodes of diarrhea - number or percent of eligible couples using a family planning method
Project Activities (compare to targets established in work plan)	- number of growth monitoring sessions and number of children under five years participating in each session - number of education sessions conducted and number of families or individuals attending - number of home visits for education and follow-up - number of immunization sessions - number of immunizations given (by type) - number of family planning methods distributed - number of ORS packets distributed - number of families or health workers trained to make and give ORS - number of workers/volunteers trained - number of clinics equipped/ staffed, etc.

SESSION 6: PREPARING A BUDGET

Purpose:

In this session, trainees discuss and practice the steps in preparing a project budget, including estimating costs and contributions, categorizing costs by line item and presenting detailed and summary budgets. The same steps and skills are useful for the development of routine budgets within organizations as well as those submitted to donor agencies.

Time: 2-3 hours

Materials:

- Handout - "Preparing a Budget"
- Handout - "Estimating and Categorizing Costs by Line Item"
- Handout - "Sample Project Budgets"
- Trainer's Reference/Handout - "Budgeting Exercise"
- Flipchart and marking pens

Prior to the session: Distribute the Handout - "Preparing a Budget," and ask trainees to read it before the session.

Steps:

1. Introduction: Explain the purpose of this session. Trainees will now complete the final step in project planning - **preparing the budget.** The budget is prepared after the project work plan has been completed so that the costs for all proposed activities may be included.

2. Review the ways in which we use project budgets:

   - To estimate types and level of project costs
   - To project additional resources needed from the organization or an outside donor
   - To guide decisions about expenditures during implementation
   - To judge the desirability of certain objectives or activities based on their cost

3. Write these steps for preparing a budget on the flipchart:

   - Identifying needed resources
   - Categorizing resources by line item
   - Estimating costs
   - Organizing and presenting

4. Identifying needed resources: Demonstrate how costs are calculated based on the resources needed to complete activities. Give several examples of project activities.

   Work with trainees to make lists of the items needed to carry them out. Make sure that items are stated in specific terms, i.e., family planning nurse vs. staff, per diem allowance for workers vs. travel. Use a chart like the one below.

Activities	Resources
1. Develop education materials for 30 project villages Assess community knowledge and needs Develop draft materials Pretest materials Revise and produce materials Distribute materials to health workers	Consultant in health education for two months Vehicle and driver for visits to at least five villages Travel allowance for consultants and field supervisor Artist Two field supervisors to work with consultant Supplies Printing of materials
2. Provide growth monitoring to 100 children monthly in 30 villages Purchase and distribute equipment Develop, pretest and produce recording forms Train 30 community health workers to conduct growth monitoring Conduct growth monitoring sessions	Weighing scales Growth cards Supplies for forms Vehicle and driver for pretest and distribution of forms Training site Transport and travel allowance for community workers during training Vehicle and driver for supervision Travel allowance for supervisors

5. Categorizing resources by line items: Distribute the Handout - "Estimating Costs by Line Item." This handout classifies individual resource items into line items and gives guidelines for calculating the different types of costs.

6. Demonstrate how to organize the resources listed in step 4. by line item.

I. **Personnel**

- Field Supervisors
- Health Education Consultant
- Artist
- Community Health Workers
- Driver

II. **Travel and Per Diem**

- Vehicle Costs

Travel Allowance for:

- Supervisors
- Consultants
- Community Health Workers

III. **Equipment and Materials**

- Scales
- Growth cards
- Supplies for education materials

IV. **Other Direct Costs**

- Printing education materials and forms
- Training space rental
- Postage, telephone, cable
- Other

7. Estimating Costs: Demonstrate how to calculate the Quantity of each item listed by referring back to the work plan. Quantity may be based on the number of individuals to be involved; length, number and location of activities, etc.

   Then estimate the Unit Cost for each example and multiply to find the Total Cost of this resource.

Example: Vehicle costs for: assessing village needs (five trips), pretest and education materials and supervising CHWs.

> Quantity = approximately 600 km (or miles) per month for 12 months
>
> Unit Cost = $.50 per km
>
> Total Cost = $3,600

8. Now show how to write each item as it might be written in a budget:

   Example:

Vehicle costs - 600 km per month x $.50 per km X 12 months	= $3,600
Project Director - 1/2 time at annual salary of $6,000/yr	= $3,000
Health Education Consultant - 2 months at $500/month	= $1,000

9. Presentation of Budgets: Distribute the Handout - "Sample Project Budgets." Discuss with trainees the need to determine budget format with their organizations and/or the donor agencies. Organizations and donors may require more or less detail, according to their own internal guidelines.

   Review and discuss the detailed budget first; then examine the summary budget.

10. Contributions and Income: Call the trainees' attention to the way in which contributions (cash and in-kind) have been shown on the detailed and summary budgets. This demonstrates to the donor that other organizations, the community, etc. are willing to commit resources to the project.

    After calculating a total budget, the manager should go back and decide which costs will be contributions to the project by his/her organization, the community, clients, other organizations, etc.

11. "Budgeting Exercise": This section can be done individually or in small groups. Distribute Handout - A.

Identifying Resources, of the exercise and follow the corresponding instructions provided in the trainer's reference.

Monitor and assist trainees to successfully complete the exercise. When they finish, answer any remaining or unanswered questions.

12. Summary: Review the steps in preparing a budget found in Step 3. Review the uses of budgets. Point out that budgets often go through many revisions before they are realistic and acceptable. Changes in the budget may also require changes in the objectives or the work plan, i.e., fewer communities to be served, fewer supervisors or supervision visits, etc. Budgeting is one of the most important management skills. A budget reflects not only the costs for project activities but also the manager's ability to predict and organize the resources needed to achieve project goals.

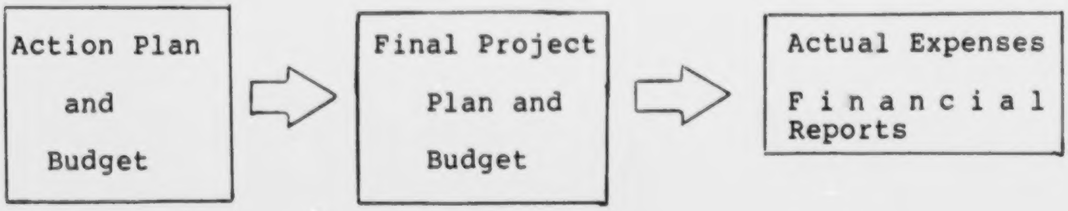
HANDOUT

PREPARING A BUDGET

A budget is a plan prepared to detail the resources and costs for carrying out a project. A budget has several valuable uses:

- To estimate types and levels of costs for project activities
- To provide your organization or donors you may approach with information about the anticipated resources required to meet certain objectives
- To guide decisions about expenditures during the implementation of project activities
- To evaluate the cost of meeting certain objectives

Those people who are involved in designing and implementing a project are in the best position to know what resources will be needed, and they should be directly involved in writing the project budget. Once the project has been funded, the budget becomes the starting point for managing project finances.



Your best guess of what is required

Your agreement with the donor or organization for their support

Reality

Calculating Costs

A budget is generally prepared after you have completed your project plan, so that costs for all proposed activities may be included. When doing a project budget, consider the following suggestions:

- Be Involved. Don't expect an accountant to do it all. The accountant knows numbers, but you know what it will take to carry out the activities that must be financed.

- Be Aware of Organization/Donor Requirements. What types of activities and costs will they fund? What budget format do they prefer? How much funding can they give?

- Be Informed and Realistic. Get estimates on the costs of needed equipment and materials, office rent, transportation, consultant fees, etc. It takes time to determine realistic figures, but this is better than either being refused funds because your budget is unreasonable or finding you did not request sufficient funds to do the project well. There will be items for which you will be unable to get totally accurate estimates. Then you will have to rely on your experience to make the most informed, realistic approximation you can.

- Be Detailed. Build up to the total amount needed for each particular category of cost by considering all the elements that affect that cost. For example, to budget for transportation, you need to consider the following:

    - Number of project site visits per year
    - Round-trip distance to the site
    - Number of kilometers per liter of petrol
    - Cost per liter of petrol

- Be Complete. Refer to examples of budgets. Ask others to review your budgets. Remember, if you forget to budget for an item you need, you will either have to do without, go back to the donor or use funds intended for other items.

- Be Thinking About Recordkeeping. Both for your own financial management and to satisfy donor requirements, you will need to keep proper records of expenditures: receipts, check stubs, copies of bills, time sheets.

In-Kind Contributions and Income

Contributed resources that are not in the form of money are called in-kind contributions and may include donated space (office or project site), time (volunteer workers) or materials. Often in-kind contributions are extremely important to the success of a project. They lower the actual cash costs. They show that your organization or the community is interested enough in the project to donate resources. They are the first step to self-sufficiency for project activities. You will need to estimate the value of these in-kind contributions and show them in your budget.

Your budget should also include information on any income you expect from the project. For example, you should include money paid by beneficiaries for services, fees paid to enroll in training or profits from the sale of goods produced during the project. You should estimate the amount of income expected and show how it will be used. For example, income may be applied to certain costs such as staff salaries or shared as profits among project participants.

Budget Format

Budgets vary greatly in terms of format, amount of detail and the categories of costs (known as line items). The more specific and detailed a budget is, the easier it is to describe the exact purpose of each expenditure. The first task in preparing a budget is to determine how much detail you need and how much is required by your organization or donor. Do you need to know if an expenditure is for pens rather than pencils; or, is it sufficient to know that the expenditure is for training supplies rather than office administration supplies; or, more general yet, that it is for materials?

Usually a budget is broken down into one-year periods. Often resources/costs are shown by source, that is, by name of the contributor. This is particularly helpful when more than one donor is involved or when there are resources (cash or other) that have been contributed by your organization, by a community, etc.

Often a summary budget, as well as a detailed budget, is required. The summary budget presents subtotals for the major cost categories. The detailed budget shows how these subtotals were calculated. The summary budget allows one to tell at a glance the relationships among line items. It is also often used as the basis for financial reporting.

ESTIMATING AND CATEGORIZING COSTS BY LINE ITEM

I. Personnel

Answers to the following questions will help you determine personnel costs for your project:

- How many people, with what kinds of skills, are needed to undertake project activities?
- Will they work full-time or part-time?
- Would it be more efficient to have a short-term consultant to do some activities?
- Will some people, who are involved in the project, be volunteering their services?
- Will people work more hours than they expect payment for? If so, they are making an in-kind contribution.

II. Travel and Per Diem

To calculate the costs of travel and per diem (food and lodging) for your project, consider these questions:

- What activities will require staff to travel? (Supervisors visits, extension agents' travel from headquarters to field locations, participants' travel to the training centers, consultant's travel to the project site, etc.)
- How far are the distances? Do travel costs vary according to the type of transport and the distance?
- If vehicles are used: What is the cost of petrol? How much does it cost to travel the required distance by vehicle?
- For how long will staff travel? Will they require an allowance for overnight lodging or food?

III. Equipment and Materials

For this section of your budget, you should get price quotations for major purchases. Here are some helpful questions:

- What equipment and supplies are needed for each of your project activities?

- Have you included enough paper and other supplies, including those needed to develop and produce training materials and periodic program reports?

IV. Other Direct Costs

Here you may include costs which do not fit in the preceding categories. Often this category is called **Operating Costs.** Answers to the following questions will help determine these costs:

- Will you have to get a telephone installed, and what are estimated monthly charges?
- Do you need to rent office space, training facilities or other rooms for project activities?
- Have you included the costs of all needed utilities - water, electricity, gas?
- What are anticipated postage, cable and telex costs?

A final word of encouragement: At first, budgeting seems like a complex, somewhat frightening task. But when you break the process down into the many smaller questions that you can answer, it is really quite easy. Do not hesitate to go to donors who have expressed interest in your groups's activities and ask for guidance in developing the type of budget they prefer.

HANDOUT

SAMPLE PROJECT BUDGET

Detailed Budget
Summary Budget

Detailed Budget (One Year)
Kigondo District Nutrition Project

Cost Category	Total Annual Cost KSH	In-Kind Contributions KSH (from Ministry of Health, Family Planning Association and Community)	Project Funds Requested KSH
I. Personnel			
A. Staff			
- 1 half-time Proj. Director @ KSH 1,500 per month x 12 mos.	18,000	-	18,000
- 2 Field Supervisors @ KSH 2,000/mo. x 12 mos.	48,000	-	48,000
- 1 Secretary @ KSH 1,600/mo. x 12 mos.	19,200	19,200	_
B. Consultants			
- 2 Family Planing Nurses for 1 day per week for 40 weeks @ 150/day	12,000	12,000	-
C. Volunteers			
- 30 Community Health Workers (stipends) @ KSH 200/mo. x 12 mos.	72,000	36,000	36,000
Subtotal Personnel	169,200	67,200	102,000
II. Travel and Per Diem			
A. Project Director and Field Supervisors: Round trips from Kigondo Town to villages (9 trips/week x 45 weeks @ KSH 40/round trip)	16,200	-	16,200
B. FP Nurses: Round trip Kigondo Town to villages 2 trips/week x 40 weeks @ KSH 40/round trip	3,200	-	3,200

Detailed Budget (One Year) Continued
Kigondo District Nutrition Project

Cost Category	Total Annual Cost KSH	In-Kind Contributions KSH (from Ministry of Health, Family Planning Association and Community	Project Funds Requested KSH
C. Community Health Workers:			
- 10 training days for 30 CHW's @150/day	45,000	-	45,000
- 30 round trips/month @ KSH 40 x 10 months for meeting	12,000	-	12,000
Subtotal of Travel & Per Diem	76,400	0	76,400
III. Equipment and Materials			
- weighing scales @ KSH 800/scale x 30 scales	24,000	-	24,000
- education materials and supplies @KSH 600/village x 30 villages	18,000	-	18,000
- office and training supplies	10,000	-	10,000
Subtotal Equipment & Materials	52,000	0	52,000
IV. Other Direct Costs			
- Office Rental	8,000	8,000	-
- Training Room Rental	500	500	-
- Telephone, Telegraph and Postage	7,000	-	7,000
- Water, Electricity and Other Utilities	5,000	5,000	-
Subtotal Other Direct Costs	20,500	13,500	7,000
Grand Total KSH	318,100	80,700	237,400

Summary Budget

Kigondo District Nutrition Project

		Total	Contributions	Total Requested
I.	Personnel	169,200	67,200	102,000
II.	Travel and Per Diem	76,400	-	76,400
III.	Equipment and Materials	52,000	-	52,000
IV.	Other Direct Costs	20,500	13,500	7,000
	TOTAL KSH	318,100	80,700	237,400

TRAINER'S REFERENCE/
HANDOUT

BUDGETING EXERCISE

A. **Identifying Resources**
B. **Estimating Cost**
C. **Detailed Budget**
D. **Summary Budget**

Note: This section contains materials for the trainer and the trainees. Each trainer's reference of instructions precedes the applicable handout.

BUDGETING EXERCISE

A. Identifying Resources

Step 1. Write several nutrition project activities and action steps on the flipchart. Use those developed in previous exercises.

Step 2. Distribute Handout - A. **Identifying Resources.**

Step 3. Ask trainees to list on their handout all of the items needed to carry out the activities and action steps that have been written on the flipchart. These should be descriptions of specific items, not general categories.

Step 4. Go on to B. Estimating Costs

BUDGETING EXERCISE

A. Identifying Resources

List the resources needed to carry out project activities and action steps. Be specific.

B. Estimating Costs

Step 5. Trainees classify the resources listed in A. by line item, and write them in column 1 - **Resources Required.**

Step 6. Trainees calculate the quantities of each item needed. This information is entered in column 2 - **Quantity.**

Step 7. Trainees estimate the cost for one unit of each item. This information is written in column 3 - **Unit Costs.**

Step 8. Trainees multiply the **Quantity** times the **Unit Cost** to calculate the total cost. This is entered in column 4 - **Total Cost.**

Step 9. Go on to C. Detailed Budget.

B. Estimating Costs

Resources Required	Quantity	Unit Costs	Total Cost
I. Personnel			
II. Travel and Per Diem			
III. Equipment and Materials			
IV. Other Direct Costs			

C. Detailed Budget

Step 10. Distribute Handout - C. Detailed Budget.

Step 11. Trainees transfer resource calculations from B. to C. To do this they must:

(1) Write items so that they state: What is needed? Quantity? Unit Price? Total price?

Example:

Petrol

- 40 round trips x average 60 km per round trip x $.60 per kilometer

(2) Write the total costs for each item in column 1.

(3) Calculate subtotals by line item.

Step 12. Trainees should decide which items will be provided by the organization, community or other sources. All contributions are entered in column 2 **Contributions** next to the individual items they will support. If contributions are from different sources, the name of each of source can be written in.

Step 13. Trainees calculate line item subtotals and grand total for **Contributions** column 2.

Step 14. Trainees calculate **Total Funding Requested** (column 3) for each item. This is done by subtracting the amount in column 2 from column 1.

Step 15. Trainees calculate line item subtotals and grand total for column 3 **Total Funding Requested.**

Step 16. Check to be sure that items have been categorized, calculated and presented correctly.

Step 17. Go on to D. Summary Budget.

C. Detailed Budget

Resources Required	Total Cost	Contribution by Source	Total Funding Requested
I. Personnel Subtotal			
II. Travel and Per Diem Subtotal			
III. Equipment and Materials Subtotal			
IV. Other Direct Costs Subtotal			
Grand Total			

D. Summary Budget

Step 18. Instruct trainees to turn to D. Summary Budget.

Step 19. Trainees transfer line item subtotals only from C. Detailed Budget to D. Subtotals are separated by **Total Cost, Contributions** and **Total Funding Requested.**

Step 20. Trainees transfer or recalculate column totals.

C. Summary Budget

Resources Required	Total Cost	Contribution	Total Funding Requested
I. Personnel			
II. Travel and Per Diem			
III. Equipment and Materials			
IV. Other Direct Costs			
Total			

UNIT 5

SESSION: WRITING A PROJECT PROPOSAL MINI-WORKSHOP

SESSION: WRITING A PROJECT PROPOSAL MINI-WORKSHOP

Purpose:

This is an individual exercise in which trainees use the skills and procedures learned in Unit 4 "Planning Nutrition Action Projects" to write their own project proposals.

Time: 1 1/2 - 2 days

Materials:

- Handout - "Writing a Project Proposal"
- Handout - "Project Proposal Format"

Steps:

1. Ask each trainee to think about nutrition problems and needs in the areas where they work. In this mini-workshop, they will develop an action plan/proposal for a project that could be carried out to address these problems. (Trainees can also be divided into groups by region or organization if the goal is to develop joint project proposals.)

2. Distribute Handout - "Writing a Project Proposal" and review with trainees.

3. Distribute the Handout - "Project Proposal Format." Review each section and answer any questions.

4. Trainees work independently on their project proposals with periodic guidance from trainers.

   Note: In past workshops, proposal writing has taken from one to two days of individual work.

5. Prior to the end of the assigned time, choose three or four trainees, depending on the time available to present their proposals to the group. Assist them by writing important points on the flipchart to facilitate their presentations.

6. Evaluate the mini-workshop by asking trainees to comment on the process of proposal writing, what they learned and the problems they had.

7. Congratulate trainees for a job well-done! Remind them that the steps in project planning and proposal writing used in the mini-workshop are the same whether one is planning for a small project with one community or a large project covering many communities. A project plan

can be an important tool for all managers interested in improving nutrition status and general well-being of women and children. A project proposal can help to convince decision-makers in our organizations and within donor agencies to commit the needed resources that will bring about this change.

WRITING A PROJECT PROPOSAL

Your project proposal is the primary source of information used by your organization and/or the donor agency to decide whether to give funding. Your project proposal will also serve as your guide for project implementation.

A project proposal is a document which describes in detail existing problems and needs, your plan for addressing these needs, the schedule of activities to be undertaken and the resources that are required. Writing the proposal requires you to define your ideas about a project and to set forth concrete objectives, detailed work plans and budgets.

Many funding agencies have preferred formats for project proposals. Others are less concerned about form as long as the proposal includes complete information. Be sure that you know what is required by the funding agencies you will approach before writing a proposal!

Important points to keep in mind as you write a proposal:

- Refer back to all the work that has led up to writing your proposal. Make full use of the data and information gained from your needs assessment and from the feedback provided by funding agencies.
- Be as detailed as possible. If your proposal is to serve as a guide to implementation, it cannot be vague. Define your decisions and choices. Changes may be needed later, but you will benefit from having a starting point which is as clearly defined as possible.
- Be sure all sections of the proposal fit together. All parts of the proposal are interrelated and you must be consistent throughout the document. To reach each objective will involve certain activities which will affect your staff requirements, your budget and your schedule.
- Move quickly to solutions. Do not spend more time (and words) discussing problems and needs than you spend explaining how the problems will be solved.

HANDOUT

PROJECT PROPOSAL FORMAT

1. Problem Statement

Describe the nutrition problem your project will address. Consider the following questions:

- What is the location?
- Who/How many are malnourished?
- What are the consequences?
- What are the most important causes?
- What are the unmet needs your project will address?

2. Project Strategy

Write a two to three sentence paragraph about how you propose to address the problems and needs identified in step 1. Include the approximate number of project beneficiaries and a description of the specific project area. Also state the starting and ending dates of the project.

3. Project Goal and Objectives

Remember:

- A goal describes the change that will occur if your project is successful.
- Objectives describe the series of accomplishments that will lead to achievement of the goal.
- Objectives should be SMART - Specific, Measurable, Area-specific, Realistic and Time-bound.

4. Description of Project Activities

Describe the project's primary activities. Tell why they were chosen and how they will be carried out. Be sure to describe the community's interest and involvement in the project.

5. Time/Task Chart

		Months												
Activity	Action Steps	1	2	3	4	5	6	7	8	9	10	11	12	Persons Reponsible
Write all activities and action steps in the sequence they will be carried out.														

6. Project Staff

Give the title, qualifications and a brief job description for each proposed staff member. If volunteers will work with the project, also describe the criteria for their selection and their responsibilities.

7. Monitoring and Evaluation

List the indicators of change to be evaluated during and at the end of the project.

Describe the methods of information collection to be used.

When and how will project activities be monitored? Who will be responsible?

When will evaluation take place? Who will be involved? What specific evaluation activities will be carried out?

8. Organization Experience

Discuss the previous experience that will help you and your organization carry out the proposed project. What kinds of community projects have you successfully carried out? What nutrition-related activities? What support will you receive from your organization and other collaborating organizations?

9. Budget

Prepare a detailed and a summary budget.

Detailed Budget

Line Item	Total Cost	Contribution	Total Funding Requested
I. Personnel			
II. Travel and Per Diem			
III. Equipment and Materials			
IV. Other Direct Costs			
Total			

Summary Budget

Line Item	Total Cost	Contribution	Total Funding Requested
I. Personnel			
II. Travel and Per Diem			
III. Equipment and Materials			
IV. Other Direct Costs			
Total			

10. Project Summary

Although the Project Summary is attached to the front of the proposal, it is written last. The summary should briefly state the problem your project will address, your strategy and the principal project activities, your organization's previous experience with this type of project and the total funding requested.

PART III

PROJECT MANAGEMENT SYSTEMS

UNIT 1

TRAINING COMMUNITY NUTRITION WORKERS

SESSION 1:	Introduction
SESSION 2:	Identifying Training Needs/Writing Objectives
SESSION 3:	Choosing Training Methods
SESSION 4:	Scheduling Training Content
SESSION 5:	Preparing a Training Session

UNIT OVERVIEW

Managers of community nutrition projects are frequently called upon to help workers and community members meet their needs for new information and skills. As such, they must often plan and participate in training workshops and in-service training activities. In larger projects, they may be responsible for training project supervisors as well as field workers and community volunteers.

This unit introduces a step-by-step method for planning training activities. It also reviews some of the techniques that are useful in the training of adults and presents guidelines for choosing techniques to meet training needs. By the end of the unit, participants will have planned a training program for community nutrition workers, complete with training objectives, schedule and sample lesson plans. The methodology introduced can be used by participants during or after training to develop training plans for their own community projects.

SESSION 1: INTRODUCTION

Purpose:

Trainees discuss the functions of training and the instances where training is necessary for the implementation of community nutrition action projects. They also discuss the composition and qualifications of training teams.

Time: 1/2 hour

Materials:

- Newsprint and marking pens or chalkboard and chalk

Steps:

1. What is training? Begin by writing the words "training" and "education" on newsprint or on the chalkboard. Ask participants: "Is there any difference between training and education?" If they say yes, ask them to describe the difference. Or, ask them to say what they think of when they hear each of these words. Allow five or six responses.

2. Stress the unique characteristics of training:

- Training prepares a person for specific kinds of action
- Training deals mostly with developing skills or teaching "how to do" something
- Training improves performance in an activity
- Training motivates or changes attitudes
- Training should lead to sustained, self-generating development

(Adapted from Training Manual for Helping Professions by Kiron Wadhera)

3. Ask: "When is training necessary in community nutrition action projects?"

   Answers should include:

   - before a project to raise community awareness about nutrition programs;
   - in the early stages of a community action project for training community volunteers or workers;
   - periodically throughout the life of the project.

4. Ask: "Who should plan and carry out project training?" Discuss with participants the role of the manager in guiding and organizing training to meet community needs. Discuss the advantages and disadvantages of enlisting other technically-trained resource specialists to work on training activities.

5. Ask: "What are the desired characteristics of training team members?" Ask participants to write down the kinds of individuals they would ask to work with them on the training of community nutrition volunteers. Make a master list of the types of individuals on newsprint, i.e., nutrition worker, agricultural worker, artist, health education person, trainer, family planning specialist, etc.

6. Ask: "What personal characteristics would you look for in training team members?"

   List the answers:

   - Training experience
   - Understanding of local problems
   - Good rapport with community members
   - Reliability, willingness to work
   - Etc.

7. Summarize: The size of the training team depends on the length of training, the number of participants and, of course, resources. The training team should be involved early on in the planning process.

   Tell trainees that we are going to use a step-by-step process in this unit to plan a training activity. The process includes the steps below. It can be used by teams or individuals for planning training workshops, in-service training and on-the-job training. The same process can be used to plan training for community nutrition workers, supervisors, and a wide variety of individuals and groups from other types of programs.

8. Write the steps in planning training activities on newsprint and display:

   a. Assessing training needs
   b. Writing training objectives
   c. Choosing training methods and content
   d. Preparing a schedule
   e. Preparing session plans
   f. Planning how to evaluate trainee knowledge and skills

SESSION 2: ASSESSING TRAINING NEEDS/WRITING OBJECTIVES

Purpose:

In this session, trainees use the job description for a community nutrition volunteer to list the information and skills the volunteer will have at the end of training. Using this list, they work in small groups to write training objectives for a three-day workshop. (An actual job description for a project worker can be substituted for the hypothetical description provided.)

Time: 1 hour

Materials:

- Trainer's Reference - "Sample Job Description"
- Handout - "Writing Training Objectives"

Preparation:

- Write or select a description of the work of a community nutrition worker.
- Make copies of the Handout - "Writing Training Objectives."

Steps:

1. Introduction: Tell participants that their task is to plan a three-day training seminar for a nutrition worker. The seminar is to be held during the first month of a year-long project and will be followed up with monthly in-service meetings.

2. List knowledge and skills required: Distribute or display the job description for a typical community nutrition worker. Review the job description together. Then, divide participants into small groups and ask them to list the information and the skills that the worker will need in order to perform the job as it is described. Have groups present their lists when they finish. Or, you may want to work with he entire group to brainstorm the information and skills the worker will need. This requires less time than working in small groups.

   Summarize: "Listing the skills and knowledge a worker must have is the first step in assessing training needs."

3. Assess existing knowledge and skills: The next step is to consider what skills and knowledge the nutrition workers already have. We can do this by interviewing them before planning the training to find out about their knowledge, attitudes and especially their expectations for training.

4. Read the passage below to the trainees. It describes the nutrition workers they will be training.

> In the village of (name of village), the community nutrition volunteers are women group members. All of them are functionally literate, and most have had from three to six years of formal schooling. They are mothers, and each has had a lot of experience taking care of her own children. When the nurse comes to the community every other month, they attend the education sessions she conducts with the community's mothers. They know a little about nutrition and are familiar with the three food groups, but sometimes they confuse the foods that belong in each group. While they take their children to the clinic when they become very sick, they also follow traditional practices for treating illnesses like diarrhea. They are eager to know more about nutrition but feel shy about trying to teach other mothers. When asked why so many of the children in the community are sick and malnourished, they said that it was because of ignorance, because the parents of these children are ignorant.

5. Compare existing skills to those required: Ask trainees to compare the list of required skills and information made earlier to what they now know about the educational level and the experience of the nutrition workers to be trained. This will help them decide what they can realistically expect to accomplish in the first three days of training.

6. What are the most important skills for the nutrition workers to have as they begin their activities in the community? Give trainees five minutes to write individually what they would expect to achieve by the end of the three-day training.

7. Writing training objectives: Distribute the Handout - "Writing Training Objectives." Tell participants that we describe or write our expectations for any training activity as behavioral objectives. Review the description of a behavioral objective and practice writing several objectives with the group.

8. Divide into the same small groups as before. Ask the groups to (1) share their individual expectations for the three-day training, (2) decide which ones they agree on, and (3) rewrite them in the form of behavioral training objectives for the three-day training program. They should be written on newsprint for later presentation to the entire group.

When they have finished, ask the groups to report on their objectives.

9. Summarize the steps covered:

   Assessing training needs including:

   - listing knowledge and skills required;
   - assessing existing knowledge and skills;
   - comparing existing knowledge and skills to those required.

   Writing training objectives in behavioral terms that describe what trainees will know and what they will be able to do by the end of training.

TRAINER'S REFERENCE

SAMPLE JOB DESCRIPTION

Community Nutrition Worker

Selection Criteria:

Community Nutrition Workers will be women of reproductive age with children of their own. They will be selected by the women in their villages. They must be literate.

Responsibilities:

1. Inform families about planned nutrition activities.
2. Work with other Community Nutrition Workers to plan and conduct monthly growth monitoring activities. (Use weight-for-age and the Road to Health Chart.)
3. Make home visits to follow up sick and malnourished children.
4. Teach families how to make improved weaning foods.
5. Make and give Oral Rehydration Solution in cases of diarrhea.
6. Keep records on sick and malnourished children identified in growth monitoring sessions and home visits.

WRITING TRAINING OBJECTIVES

Training objectives, also called behavioral objectives, are statements about the expected results of training activities. Training objectives are most often written in terms of the knowledge, skills, and attitudes the trainee will acquire during training. For example:

1) By the end of the training workshop, participants will be able to teach small groups of mothers how to prepare and give at least two improved weaning foods.

2) By the end of training, participants will be able to weigh and complete growth cards successfully for children 0-5 years.

Now, write your own training objectives.

By the end of training, participants will be able to

____
____
____
____
____
____
____
____
____
____
____
____

Ask yourself: Are these objectives realistic given the educational level of the participants, the length of training and the resources available? If not, you may want to change them.

SESSION 3: CHOOSING TRAINING METHODS

Purpose:

Trainees compare didactic and participatory training approaches and discuss their usefulness in the training of community nutrition workers. They also discuss the characteristics of community workers and review general statements about adult learners. The session ends with a review of specific participatory training techniques.

Time: 2 hours

Materials:

- Trainer's Reference - "Role Play: Training Styles" with copies for role players
- Handout - "Characteristics of Adult Learners"
- Handout - "Participatory and Experiential Training Methods"

Preparation:

- Copy the description of the role play and the handouts.
- Assign roles and practice the three role play situations.
- Select five or six trainees or trainers to participate in the role play.
- Prepare questions for discussion.

Steps:

1. Introduction: Introduce this session by telling participants that we are now at the stage in the planning process when we need to decide on the exact information to be included in each of our training programs and the training techniques we will use. In this session, we will take a look at several different training approaches and the techniques appropriate for use in community training activities.

2. Role Play: Training Styles. Role players assume the roles of Trainer and Trainees to demonstrate three different types of training: didactic, participatory and experiential. (See instructions attached.)

3. Discussion: Ask participants to comment on the role play by asking the following questions:

   - What happened in each of these three situations?

   - What was the role of the facilitator in each of the situations?

   - What were the differences in the three approaches to teaching the same subject?

   - In which one do you think the participants learned more about the topic?

4. Write participants' comments about situations 1,2,3 on separate sheets of newsprint. When you have finished the discussion, write at the top of the sheet for situation 1, **didactic**; situation 2, **participatory**; and situation 3, **experiential.**

5. Give examples of training situations in which each of these styles might be appropriate. Ask trainees to describe the type of training that would be most effective with the community nutrition workers they want to train.

6. Distribute the Handout - "Characteristics of Adult Learners," and review the eight points about how adults learn. Encourage trainees to use participatory and experiential techniques in their training as much as possible. Write the following information about retention of knowledge on the flipchart and discuss.

   We retain 10% of what we hear,
   20% of what we hear and see,
   30% of what we do, and
   40% of what we do in a real situation.

7. Distribute the Handout - "Participatory and Experiential Training Methods," and review with participants.

8. Close the session by telling trainees that while we would like to use highly participatory techniques whenever possible, there are certain things that determine which techniques we choose in our training. To select training methods, we must answer the following questions:

   - What method or combination of methods will insure that trainees learn the necessary information?

   - Will trainees be able to understand the training method and participate fully?

   - How much time do we have? Is the time required for a certain method justified by what the trainees will learn?

   - What resources are required (materials, money) and can they be made available?

ROLE PLAY: TRAINING STYLES

Roles: **1 Trainer**
3-4 Trainees

Choose a nutrition topic that will involve trainees in a practice activity, e.g., making weaning foods, growth monitoring, promoting family planning.

This role play is done in pantomime (without speaking) by having players wear name cards "Trainer" and "Trainee." This helps focus the participants' observation and discussion on the training approach used instead of training content.

Situation 1

The **Trainer**, standing in front of the seated Trainees, presents the topic in lecture form. He/She may use visual aids. **Trainer** does not ask questions of the **Trainees.** Occasionally **Trainees** raise hands to ask questions which the **Trainer** answers.

Situation 2

The **Trainer**, seated with the **Trainees**, presents the same topic using visual aids which are passed around. **Trainer** asks many questions of **Trainees**, which they discuss among themselves and respond to. **Trainer** may demonstrate something, asking **Trainees** to help.

Situation 3

The **Trainer** and **Trainees** are working together on a project, moving around the room, discussing visual aids and reference materials, making weaning food, weighing children in role plays, etc.

Process:

1. Roles should be assigned and the three situations should be practiced prior to the session.
2. Tell Trainees they will be watching three role plays and that you want them to observe the interaction between the **Trainer** and **Trainees** in each of the cases.
3. Each situation should last 3-4 minutes with players leaving the room and re-entering for each new situation.
4. Discussion

(Adapted from Bridging the Gap, Save the Children)

HANDOUT

CHARACTERISTICS OF ADULT LEARNERS

1. **Adults must want to learn.**

2. **Adults will learn only what they feel a need to learn.**

   If an adult does not feel dissatisfied with his/her own performance or deficient in a given area, he/she will not learn what is needed to correct the deficiency or poor performance. When adults are dissatisfied, they are interested in learning something new that can correct the problem, and will actively seek opportunities to learn.

3. **Adults learn by doing.**

   Active, not passive, methods provide the best learning environment. Through involvement and action, adults increase their understanding of new concepts and skills and their confidence to apply these. The facilitator must provide time for assimilation, testing and acceptance.

4. **Adult-learning centers on realistic problems.**

   Hypothetical cases or situations that do not correspond to real life conditions do not motivate an adult to learn. Examples and exercises in a training program should be within the possible, if not actual, reality experience of the adult.

5. **Experience affects adult learning.**

   Past perceptions, actions and results experienced by an adult determine what he/she accepts or does not accept as new knowledge.

6. **Adults learn best in an informal environment.**

   An atmosphere which encourages risk-free learning through participation in shared discussions and activities, motivates adults to be open to new concepts and skills and to visualize and experiment with how these concepts apply to their personal needs.

7. **Vary learning methods in teaching adults.**

   Learning methodologies (case studies, role play, small group discussion, etc.) should be varied to capture and maintain adult interest. Constant repetition of any method will cause adults to become bored and fatigued.

8. Adults want guidance, not grades.

Adult learning is very individual, and goals for achievement are set by determining "What do I need to improve myself?" Adults seek feedback on "How am I doing?" to correct poor or substandard performance. They do not compete in knowledge and skill acquisition nor seek authority, recognition, or reward for their learning.

HANDOUT

PARTICIPATORY AND EXPERIENTIAL TRAINING METHODS

1. Audio-Visual Methods

These include posters, slides, flannelgraph, films, etc. They make the transfer of information easier and more interesting. They are very useful when training workers to recognize the signs of malnutrition, contraceptive methods, etc.

2. Brainstorming

Brainstorming is a technique for generating new ideas by drawing ideas from the group, instead of depending on the ideas of a few leaders or participants. Brainstorming helps to convince participants of the value of the whole group and its ability to generate creative solutions to problems.

In brainstorming, all members of the group are encouraged to contribute ideas. All ideas are accepted and written down. There is no criticism or rejection of an idea. This is important because it encourages everyone's participation. As many responses or ideas should be generated as possible. When the group has finished, the facilitator may choose to categorize, select, comment or judge responses depending on the purpose of the exercise. Care is taken at this stage not to discourage any member from future participation. The brainstorming process produces a final result that is a group product.

3. Small Group Discussion

A large group is divided into subgroups of no more than five people, and the group is given a topic for discussion, a list of questions to answer or statements to react to. The subgroups discuss and list their comments. Returning to the larger group, subgroups present their comments. Questions may be asked or comments made.

Dividing a large group into subgroups can be done at random or on the basis of interests, experience, region, profession, etc. You may also divide groups to separate more and less vocal trainees, giving the latter the chance to participate freely.

4. Demonstration

This includes showing and allowing participants to practice certain techniques and skills. The following have been demonstrated during past workshops:

- Growth monitoring techniques
- Preparation of oral rehydration solution
- Preparation of a variety of weaning mixtures

Facilitators should take care that ingredients, amounts and utensils are exactly those that will be used by trainees. It is a good idea to use a poster and/or a handout to reinforce information given verbally during a demonstration.

5. Games

Nutrition games have been developed by several organizations and countries. Games, if followed by discussion, can be very useful for reinforcing information presented in lectures or discussions. Board games, like Nutrition Snakes and Ladders, are a good way to reinforce information about the relationships between diarrhea, hygiene, feeding practices, child-spacing and malnutrition. Card games can help groups understand food classifications, and still other games might help participants practice allocating household resources to achieve adequate food intake for the family.

Games should be used sparingly, and always with plenty of explanation before and discussion of lessons learned afterwards.

6. Case Study

An actual situation or problem is presented in writing or verbally, sometimes with the use of slides or transparencies. The group or subgroups are asked to discuss the situation presented. Discussion can be focused on a set of questions to be answered, on a controversy or problem in the case study, etc.

A variation of this method is the incident method. In this type of case study, a situation is described, but the solution or way it was handled is not. Subgroups or individuals are asked how they would handle the situation. They may be asked to present their solutions to the entire group. The facilitator can lead a discussion comparing the advantages and disadvantages of each subgroup's solution. The exercise might end with a description of what really happened. It should be emphasized that the solution chosen is neither right nor wrong but merely one of many solutions that could have been chosen.

7. Role Play

Trainees are assigned roles similar to real life situations and given guidelines indicating the attitudes and expectations of the people they are playing. After acting out a situation before the group, discussion follows. Role plays may be planned as one would write a play, or the situation and characteristics of players may be described with details left up to their imaginations.

This is an excellent way to help trainees understand the attitudes and problems of the population groups they are working with. Simulated meetings between volunteers and community members, health workers, etc. could be used. Role plays we have used in nutrition training include the following:

- A home visit by a volunteer to the family of a malnourished child
- A community (women's group) meeting to discuss the problem of malnutrition
- A volunteer or worker trying to introduce the concept of family planning to a small group of women
- Other problems faced by workers and volunteers in their work

Discussion at the end of a role play is very important. The group should be encouraged to say what they thought about the situation and the behavior of the players. It is also important that the facilitator prepare some open-ended questions about the role play situation to stimulate discussion.

Example:

- What did you like about how the nutrition volunteer handled this situation?
- What do you think the mother was feeling? Do you think she understood? Why? Why not?

Role playing can make learning fun and easy. It can also help participants see new ways to approach situations and solve problems.

8. Project or Agency Visit

Trainees are taken to a specific project or institution such as:

- A nutrition rehabilitation center
- A maternal child health /nutrition clinic with outreach program
- A nutrition/family planning clinic supported by a community income-generating scheme

The purpose may be to demonstrate the activities of an on-going project and/or to expose participants to malnourished children and their families. In ideal cases, trainees are able to practice the skills they have been learning, i.e., weighing and charting the growth of children or using the arm circumference tape or other tools to assess malnutrition, counseling the mother of a sick child, etc.

In all cases, trainees should be properly briefed about the purpose of the visit and areas for observation should be defined before the visit.

9. Practice in the Community

It is often useful to have trainees practice the skills they are learning in a community, under the supervision of trainers and resource specialists.

If prior arrangements are made, trainees can:

- make home visits;
- measure children and assess nutritional status;
- prepare and lead a discussion on a given topic with a group of mothers;
- conduct a weighing activity with community leaders, etc.

In fact, any time it is possible to do so, you should create the opportunity for trainees to **do** in training the things you expect them to do after training.

SESSION 4: SCHEDULING TRAINING CONTENT

Purpose:

Using the training objectives developed during Session 2, participants identify and sequence training topics and activities to complete a schedule for the three-day training seminar.

Time: 2 hours

Materials:

- Handout - "Planning Training Content"
- Handout - "Training Schedule"
- Flipchart and marking pens

Preparation:

Copy worksheets and make sure flipcharts, markers and tape are available.

Steps:

1. Introduction: Distribute the Handout - "Planning Training Content." Trainees will work in the same small groups formed in Session 2.

2. Selecting Topics and Activities: Instruct small groups to begin by writing one of the training objectives they agreed to in Session 2 in the first column on the handout. In the next column, they should list the topics or information that should be included in the training to make sure that this objective is achieved. In the final column, groups should describe the training activities that they will use to teach and reinforce the required skills.

   Groups should continue until they have listed all of their training objectives, the topics and the activities that might be included in their three-day program. Remind them that training content should be realistic. When the groups finish this exercise, have them review their lists. Encourage them to eliminate and/or combine topics until they have a realistic list.

3. Sequencing Topics and Activities: Once groups agree on their training topics and activities, ask them to assign each topic and each activity a number that indicates its order in the training sequence.

4. Scheduling: Distribute the Handout - "Training Schedule." Ask groups to transfer their topics and activities in the correct order to the blank training

schedule and/or to three pieces of newsprint headed Day 1, Day 2, Day 3. While doing this, groups will need to think about the amount of time that should be devoted to each topic and activity. Remind groups that they should include enough time for warm-up exercises, orientation to the workshop and any other non-nutrition topics. They should also leave some time in the schedule to deal with participants' questions and needs.

This is a preliminary schedule. Once groups begin to talk about training methodologies in greater detail, they will want to make changes in the schedule.

5. Is the Training Plan Realistic?: When groups finish their schedules, ask them to ask themselves the following questions:

   - Is our plan realistic?
   - Are we trying to cover too much/too little in the time available?
   - Will the topics and activities listed meet our objectives for the training?
   - Have we included unnecessary topics?
   - Are there topics other than those listed that we should include?

6. Presentation of Plans: Have small groups present their training objectives and schedules to the entire group. Make sure to emphasize that there is no such thing as a perfect training schedule. Each group, and each project, will develop its own plan according to its understanding of the training needs and the resources available.

7. Summary: Review again the steps in planning training content, pointing out to participants that they have now completed steps one, two, three and four of the planning process. They have (1) assessed the training need by looking at the job description and a statement about the knowledge and skills of trainees; (2) they wrote objectives for a three-day training activity; (3) they chose training content; and (4) they developed a tentative training schedule.

HANDOUT

PLANNING TRAINING CONTENT

OBJECTIVE	TOPICS	ACTIVITIES

HANDOUT

TRAINING SCHEDULE

DAY 1	**DAY 2**	**DAY 3**
Morning Opening	Morning	Morning
LUNCH	**LUNCH**	**LUNCH**
Afternoon	Afternoon	Afternoon Evaluations

SESSION 5: PREPARING A TRAINING SESSION/EVALUATING TRAINING

Purpose:

To practice planning and presenting a training session.

Time: 1 hour to prepare one session plan

Materials:

- Handout - "Session Plan"
- Flipchart and marking pens

Steps:

1. Introduction: Distribute the Handout - "Session Plan," and begin by telling participants that a session plan is the tool used by the trainer to prepare for the presentation of information and activities during a session.

   Review the items asked for on the Handout - "Session Plan," explaining the meaning of each item.

2. Preparing a Session Plan: Assign topics, or ask each group to choose one (or more) of the session topics they included in their training schedule.

   Groups should complete at least one session plan with as much detail as possible and prepare to present the plan to the entire group.

3. Presentations: Groups present their session plans for discussion and suggestions. If time permits, you may want them to practice delivering the sessions to the group as if it were made up of the potential trainees.

4. Evaluation: Discuss the techniques for evaluating training sessions and training workshops. Help groups define measurable indicators or standards of performance for their sessions. Demonstrate how behavioral training objectives lead to a logical evaluation plan for a training activity.

5. Summary: Review the steps in planning training activities:

   - Assessing the need for training
   - Writing training objectives
   - Choosing training methods and content
   - Preparing a schedule
   - Preparing session plans
   - Planning how to evaluate trainee knowledge and skills

Remind participants that this framework can be used to plan almost any type of training program.

Note: Trainees have now completed, as a group, a training plan for one activity. If time permits, or workshop objectives call for participants to develop training plans for their own projects, you may want to base the entire exercise on an actual training need.

We did exactly this during workshops in Nepal and Indonesia, where management trainees planned and subsequently conducted training for field workers and village nutrition volunteers.

HANDOUT

SESSION PLAN

Topic or Activity:

Length of Session:

Materials:

Important Information to Include:

Steps: (Develop a step-by-step plan of how you will conduct the session. Describe all activities, exercises and training methods.)

Evaluation: (How will you know if the trainees have learned what you wanted them to learn?)

UNIT 2

SESSION 1: What do we need to know?

SESSION 2: Records and Reports

SESSION 3: Prototype Record Keeping System

SESSION 4: Evaluating Activities with the Community

UNIT OVERVIEW

The first step in evaluation is to have clearly stated objectives and work plans for a project. When we plan community nutrition projects, we are careful to describe all of the activities we want to carry out, the time frame for those activities and the results we expect to achieve by the end of the project. We also identify indicators of project progress, or the concrete observable facts that will tell us whether or not a project is having the desired results.

Evaluation tells all of us - the planners, the beneficiaries and the donors - if we have done what we planned to do, and if what we did has had the results we expected.

For the project manager (agency and community), evaluation is an on-going activity throughout the life of a project. It is the management function that helps us understand what worked, what did not work and why. By regularly evaluating our efforts, we learn important lessons that help us revise our plan of action in order to achieve the best possible results with the resources we have available.

For the project donor, evaluation tells (1) if the implementing organization has carried out the activities it proposed to carry out; (2) if those activities have achieved the results predicted; and (3) if the funding and resources for the project were managed correctly. Donors also use project evaluation to decide whether or not a project or agency is worthy of continued funding, and in some cases, whether or not the project strategy deserves support in other places.

In this series of sessions, we will review the basic principles of project evaluation. Participants will first develop a set of evaluation questions that they hope to answer at different stages of a project. They will also review methods for collecting information about project activities and results, focusing on specific information that is important for the management of community nutrition activities. The second session of the series discusses the collection of information and has participants compare monthly record formats. Guiding principles for the development of community records are given, although it is strongly suggested that managers enlist the help of experts to develop records and reports that meet the needs of their agency, the community and donors. The final session provides participants with practice, using information from hypothetical or actual projects to answer evaluation questions, to pinpoint problems and to develop further questions and methods for collecting supplementary information.

SESSION 1: WHAT DO WE NEED TO KNOW? HOW CAN WE FIND OUT?

Purpose:

In this session, trainees review the basic uses of evaluation and they list questions about community nutrition projects that evaluation can help to answer. They also identify the information needed to answer these questions and the ways of collecting it.

Time: 2 hours

Materials:

- Newsprint and marking pens or chalkboard and chalk
- Handout - "Hypothetical Project Information"
  Note: Information from an actual project may be used instead.
- Handout - "Questions About Community Nutrition Activities"

Preparation:

- If you are using newsprint, prepare the chart shown in step 7 below.
- Make copies of the Handout - "Hypothetical Project Information."
- Make copies of the Handout - "Questions About Community Nutrition Activities."

Steps:

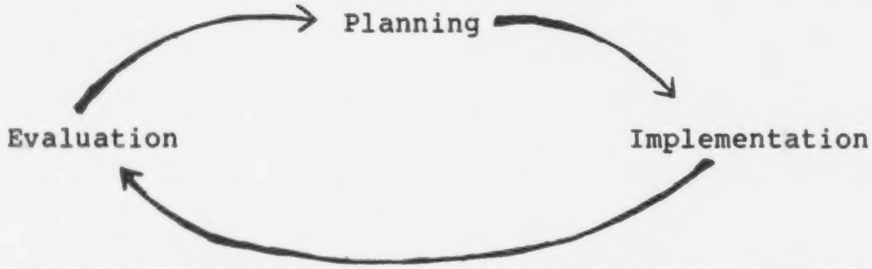
Part 1 - What do we need to know?

1. Ask the questions below one at a time. Encourage participants to brainstorm their answers. Write key phrases from participants' answers on separate sheets of newsprint together with each of the questions.

   - What do we mean by evaluation? or evaluating a project?
   - Who is interested in evaluation?
   - Why do we evaluate projects and activities?

2. Talk briefly about the generally accepted definitions of evaluation, distinguishing between on-going evaluation (monitoring) and final project evaluation.

   Explain the management cycle (planning, implementation and evaluation) showing how evaluation leads to new and revised plans, based on lessons learned and changing circumstances during one complete management cycle. During the life of a project we may complete many management cycles.



3. Display the following questions and ask participants to keep them in mind during the rest of the unit. These are the general questions that evaluation can help us answer.

   - Did we do the things we planned to do? If not, why not?
   - Did the target group respond the way we thought they would? If not, why not?
   - Did the nutrition and health of our target group improve?

4. Divide the participants into small groups (4-6 persons each) and inform them that they have been chosen as Project Evaluation Teams for a model community nutrition project. Give each participant a set of objectives and a work plan either from a hypothetical or from an actual project. Ask them to review these project materials individually. (Hypothetical project information is included.)

5. Ask each Project Evaluation Team to make three lists of questions they will ask at different times in the project implementation, to make sure the project is on target. The first list should be the questions they will ask each month; the second list should be those they will ask after six months of project activity; the third list should be those questions they will ask at the end of the project to find out if the project has been successful.

6. When groups are finished, have the first group display its list of monthly questions; the second, its list for evaluation at six months; and the third, its list of questions to be asked at the end of the project. When they have finished, ask the remaining groups to add questions they would ask that were not mentioned.

   The facilitator should congratulate the evaluation teams, and tell the group they will be referring back to these lists during the rest of the session.

7. Choose several of the evaluation questions listed in each category, and transfer them one at a time to the first column of a chart like the one that follows.

Evaluation Question	Indicators/Information We Need to Answer this Question

8. Fill in the second column of the chart by asking participants to be specific about the information they must have to answer each question.

   Example:

Evaluation Question	Indicators/Information We Need to Answer this Question
Have activities planned been carried out on schedule?	What was planned? When? What activities were carried out? When? Who attended? How many?

9. When you have finished listing the information needed to answer three or four questions, pass out the Handout - "Questions About Community Nutrition Activities." Review it with the participants. You may wish to make up some exercises to demonstrate how certain information and indicators might be compared and used to answer evaluation questions.

Part 2 - How can we collect the information we need?

10. Review with participants the general methods and tools managers use to collect the information they need to monitor and evaluate the activities and results of community nutrition projects. Include a description of:

- Baseline survey
- Interviews with workers, leaders, beneficiaries
- Client records
- Community reports (monthly, quarterly, semester, etc.)
- Supervision reports
- Mini-surveys
- Meetings/discussion groups
- Existing records

11. Discuss the factors that affect the information we decide to collect and the methods we use.

- What do we need to know? Only information that we must have to guide the project and evaluate results should be included.
- How much money and other resources do we have for the evaluation component of the project?
- Who can collect and compile the information we need? If community workers cannot read and write, or if there are only a few supervisors with minimal transport, the amount and quality of information we can collect will be limited.

12. Add two more columns to the chart so it looks like this:

Evaluation Question	Indicators/Information Needed to Answer this	How Will You Collect It?	How Often?

Ask participants to help you complete the chart for the questions you worked on earlier. For each piece of information ask "How will you collect the information you need?" and "How often will you collect it?"

13. Individual Evaluation Plans - If there is sufficient time during the workshop, each trainee should be asked to use a chart, like the one above. Have the trainees identify the information and sources needed for their own projects. Trainers should be available at this time to assist the trainees.

HANDOUT

HYPOTHETICAL PROJECT INFORMATION

Nutrition Action in the Village of Ngamani

Background

In the village of Ngamani, the (community members, women's group, health committee, etc.) started a nutrition action project in June 1982. The village has about 500 families, with about 400 children under five years old.

The (women's group, committee, etc.) was helped by the (health worker, social development officer, agricultural extension worker) to understand more about the problem of malnutrition and what they could do to reduce the high level of malnutrition in the community. (She/He) helped the community to decide what kinds of activities they would try. Together they wrote a work plan and set targets for the first year.

They approached the (Ministry of ____, the Women's Bureau) with a letter telling about the nutrition problem in the community and what the group wanted to do to solve it. The (Ministry) promised $(____) and a hand grain-grinding machine to help them get the project started.

The Ngamani village project has three components: regular growth monitoring and follow-up; nutrition and family planning education; and village production, sale and distribution of a weaning food supplement.

Project Objectives

By the end of the first year of the project, the (community, women's group, etc.) hopes to have accomplished the following:

1. Assessed (weighed/measured) the nutrition status of at least half of the 400 children under five in the community (three) times each during the first year.
2. Reached at least 100 families with each of their monthly educational activities.
3. Made and gave, or sold at a very reduced cost, weaning foods to each of the "high risk" children identified in growth monitoring. Each child will receive 2 kg of weaning supplement per month.
4. Made and sold about 50 kg of weaning food a month.

5. Increased the number of families practicing family planning.
6. Improved the condition of at least 75 percent of the "high risk" (malnourished) children they have helped.

Note: The project work plan is on the next page.

Work Plan - Year 1

Activity	Person Responsible	Month 1	2	3	4	5	6	7	8	9	10	11	12
1. Train 6 volunteers from the group in nutrition 3-day workshop 1-day refresher	Health Worker	X	X	X				X			X		
2. Train 8 volunteers from the group how to make and sell weaning food	Agriculture Worker		X										
3. Buy 2 weighing scales	Chairman		X										
4. Request hand grinding-mill	Secretary	X											
5. Conduct growth monitoring every other month beginning month 1	Nutrition Volunteers	X		X		X		X		X		X	
6. Make follow-up visits to high-risk children at least monthly	Nutrition Volunteers	X	X	X	X	X	X	X	X	X	X	X	X
7. Conduct nutrition/ family planning education session monthly	Nutrition Volunteers		X	X	X	X	X	X	X	X	X	X	X
8. Make and distribute weaning mix weekly and sell daily			XX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXXX	XXX
9. Meet monthly	All	X	X	X	X	X	X	X	X	X	X	X	X

HANDOUT

QUESTIONS ABOUT COMMUNITY NUTRITION ACTIVITIES

MONITORING AND EVALUATION	WHAT INFORMATION CAN WE USE TO ANSWER THIS QUESTION?
Growth Monitoring: 1) Has growth monitoring been carried out as planned in the community (i.e., at least once every ______ months)	- How many growth monitoring sessions have been carried out in this reporting period? Compare this number to the number planned.
2) Has growth monitoring reached most of the children 0-3(5) yrs in the community?	- What percentage of the total children 0-3(5) yrs. have been measured/weighed at least ____ times? Calculate: $\left(\frac{\text{Number of children 0-3(5) yrs. measured at least \_\_\_\_ times.}}{\text{Total estimated number of children 0-3(5) yrs. in the project area.}}\right) \times 100 =$
Nutrition/Health Education: 1) Have group education sessions been carried out as planned?	- How many group education sessions have been carried out in this reporting period? Compare this number to your plan.
2) How many families have participated in nutrition education sessions?	- The average number of adults participating in group education sessions. Calculate: $\left(\frac{\text{Total number of women and men attending all sessions.}}{\text{Total number of sessions.}}\right) = \_\_$ persons per session
3) If education is carried out in home visits, have home visits been carried out as planned?	- How may home visits were made during this period? Compare this to home visits planned.

Follow-up and Improvement of "High Risk" (Malnourished) Children:	
1) How many of the "high risk" children found during growth monitoring have been treated according to your plan for follow-up of "high risk" cases?	- What percentage of "high risk" children identified have received: a. at least ____ home visits? b. growth monitoring at least ___ times per month? c. referral? d. weaning food supplements at least ___ times per month? (This depends on the plan for follow-up for each project.)
2) Have "high risk" children improved as a result of the project?	- What percentage of "high risk" children identified have improved, stayed the same or become worse during your project? Calculate: $\left(\frac{\text{Number of high risk improved}}{\text{Total \# high risk}}\right) \times 100 = \_\_\%$ improved $\left(\frac{\text{Number of high risk with no improvement or worse}}{\text{Total number of high risk}}\right) \times 100 = \_\_\%$ same or worse $\left(\frac{\text{Number or high who died}}{\text{Total number high risk}}\right) \times 100 = \_\_\%$ deceased $\left(\frac{\text{Number of high risk not followed up}}{\text{Total number high risk}}\right) \times 100 = \_\_\%$ lost to follow-up + 100% (should equal)

Birth Spacing:	
1) If the project supplies contraceptives, how many couples received contraceptives supplies from the project?	- How many of each contraceptive has the project distributed? To how many couples? - How many couple-years-of-protection can be attributed to the project?
2) Has the use of family planning methods increased	- Compare the number of family planning acceptors at the beginning of the project, to the number at different times during the project and at the end of the the project.
Immunization:	
1) Has the number of children with completed immunizations increased?	- Compare the number of children with complete doses of specific vaccines at the beginning and at the end of the project.
Breastfeeding/Weaning Practices:	
1) What percentage of women are following the infant feeding guidelines of the project? For example: 0-5 months breastfeeding only, 5-24 months breastfeeding plus mixed solid diet.	- Compare percentage of infants 0-5 months who are breastfed only, to those given a bottle or bottle and breast. - Compare the percentage of children 5-24 months being fed according to the guidelines, to those being fed in other ways.
2) Has the project had any effect on the number of mothers breast and bottlefeeding?	- Compare at the beginning and at the end of the project, the percentage of infants 0-12(24) months who are breastfed and not bottlefed.

Breastfeeding/Weaning Practices (continued):	- Compare at the beginning and at the end of the project, the percentage of infants 0-12(24) months who are fed with a bottle.
Community Weaning Food Distribution: 1) How many families have benefited by the weaning food distribution (or sale)?	- Number of families receiving supplement for one or more children in each month. (Calculate percent of total number of families with children.)
2) What is the cost of the production and distribution of weaning food?	- Calculate: -Actual costs of raw materials, paid labor, equipment, transport and other costs = Total Expenditure - Total Expenditure minus Total Income from sales and donations = Net Cost or Profit - Net Cost or Profit divided by Number of Units produced (kilos, packages) = Net Cost Per Unit
3) Is the cost of the weaning food distribution to the community worth the benefit to "high risk" children?	- Calculate the number of "high risk" children receiving the weaning supplement who have shown improvement. - Divide the net cost of project to community by the number of "high risk" children improved = the Cost For Each Child Improved by the project. - What does the community think about the project? Are they willing to continue contributing their time and, perhaps, their funds to the project?

SESSION 2: RECORDS AND REPORTS

One of the goals of a community nutrition project is to help the community understand its nutrition problems and the effects that its own action can have on these problems. To do this, the community must be able to collect and use information about its activities and results.

Purpose:

Trainees will discuss the types of information we need in order to monitor and evaluate community efforts. They will also discuss the constraints to community record keeping and some general guidelines for design of community records and reports. Different types of community reports will be examined and the strengths and weaknesses of each will be noted.

Time: 1/2 hour

Materials:

- Trainer's Reference - "Community Records and Reports"
- Handout - "Examples of Community Records"

Preparation:

Make sufficient copies of sample forms so that each small group will have a set.

Steps:

1. Introduction: Review the information that might be collected monthly or quarterly to assess community nutrition activities.

2. Make sure the list includes information about activities, about the nutrition status and improvement of women and children and about outside resources mobilized by the community.

3. Tell trainees that we are now going to decide on what kind of community record keeping system we need for our project. Ask trainees to close their eyes and try to think of themselves back in the villages or communities they intend to work with. Ask them to think of the community members, the skills they have and any problems they might have keeping records about nutrition activities. Ask them to open their eyes and write on a piece of paper a statement about the kinds of records and

reports their communities could learn how to keep and use. You might have them finish the sentence:

"Community records must ________________________."

4. Now, ask several trainees to read their statements. Other members of the group may wish to comment. Write the statements on newsprint. Some examples include:

   Community records must:

   - be simple and easy to understand;
   - be pictorial, in some cases;
   - help the community volunteers follow up and evaluate improvement of malnourished children;
   - record activities and participating families;
   - help the community evaluate the effects of their efforts.

5. Tell trainees that every project must develop its own system for record keeping based on the needs and resources of the community, the managers/advisors and the funding agencies. Give small groups copies of three or four different community record forms with information filled in. Ask them to examine the records and list what they think would be the advantages and disadvantages of each type. Combine their observations, and point out any advantages and disadvantages that have not been mentioned.

6. Discuss why it is important to get outside assistance from an expert for the design of project records and reports. Make sure to mention the need to pretest reports and to train community workers and supervisors to complete and use them.

COMMUNITY RECORDS AND REPORTS

Designing Records and Reports

The design of records and reports is a highly technical area. For new projects, it is a good idea to enlist the help of an expert who can work with you to make sure everyone's needs for information are satisfied, including the community, the managing agency and the donor, if there is one.

For on-going projects, some type of record keeping system is usually in operation. You should ask yourself if that system is providing you with the information you need and, if it is not, how could you improve it? Again, an expert could be of great help. Remember that you must first decide what you need to know, so that an expert can help you decide how best to obtain the information.

Pretesting Records and Reports

In small action projects, it may not be possible to do extensive pretesting of records and reports. You can do the following, however, to make sure that records and reports are understandable:

- Make sure the format and language used in records and reports are familiar to the individuals who will use them.
- Have several community workers/volunteers use hypothetical information to fill in the records or reports.
- Explain to a group of community workers, supervisors, etc, how to complete records and reports. If they do not understand, make changes in your explanation until you are sure that it is understandable.

Training Community Workers to Complete and Use Reports

Adults learn by doing! First, make a list of the steps your trainees will have to complete to successfully maintain records and reports. Make sure that you explain each step in this process and any forms they will be expected to use. Then, conduct a practice session in which the trainees complete forms using either authentic or dummy data. They should first do this with assistance and then alone. Pinpoint any problems they have and work with them individually until you are satisfied that they have mastered all of the required steps.

HANDOUT

EXAMPLES OF COMMUNITY RECORDS

1. Individual records

Name ______________________
Mother's Name ____________
Birthdate ________________

Immunization ____________

____
____

Road to Health Chart

Name ________________
Mother's Name __________
Birthdate ______________
Date Registered ________

1/83	weight 4.9 kg diarrhea mother taught to prepare ORS
3/83	weight 5.0 kg slow growth counseled
4/83	home visit child O.K.

Child Clinic Record

These individual records can be kept by the mother as home-based records or by a community worker.

2. Community worker's activity record

Name __________________________ Month __________________

Date	Activity	Comments
1/1/83	Weighing clinic in Matibo Weighed 17 children, nutrition education class for 10 mothers	
1/4/83	Home visits - 5 families	
1/5/83	Meeting with Chief about new dispensary	
1/6/83	Distribution of weaning foods - 15 kg distributed	
1/7/83	Education meeting with youth club	
1/10/83		
etc.		

3. Cumulative Family Record

MATERNAL/CHILD HEALTH AND FAMILY PLANNING
REGISTER

Family #__________

Village__________ Health Worker __________

Woman's Name______________ Age_____ #Live births_______ #Living Children__________

Address

DATE OF CONTACT							
WOMAN:	Repro.Status						
	FP/Method						
	Contraceptive						
CHILDREN UNDER 5:							
NAME: AGE:							
Nutrition	A/C						
	Weight						
Immun:	Polio	1					
		2					
		3					
	DPT	1					
		2					
		3					
	Measles						
	BCG						
Diarrhea: During last 2 weeks?							
If yes, treated with ORS?							
NAME: AGE:							
Nutrition	A/C						
	Weight						
Immun:	Polio	1					
		2					
		3					
	DPT	1					
		2					
		3					
	Measles						
	BCG						
Diarrhea: During last 2 weeks?							
If yes, treated with ORS?							
NAME: AGE:							
Nutrition	A/C						
	Weight						
Immun:	Polio	1					
		2					
		3					
	DPT	1					
		2					
		3					
	Measles						
	BCG						
Diarrhea: During last 2 weeks?							
If yes, treated with ORS?							

Instructions:

Woman: Reproductive Status - Write one of the following: Breastfeeding, Pregnant, Family Planning, At Risk
Family Planning/Method - Write the method used
Contraceptives - Write the type and the quantity of contraceptives given.
Children Under 5 yrs. - Complete one block for each child in the family under 5 years old.
A/C=Arm Circumference - Write the child's arm circumference.
Weight - enter either the actual weight of the child or the nutrition classification classification of weight for age from the growth chart.
Immunization - At the time of registration, mark all vaccines that a child has taken. At every other contact, mark only new vaccines taken.
Diarrhea during last two weeks? - Write yes next to this question if the child has had diarrhea during the past two weeks.
Ask the mother how diarrhea was treated. If she mentions ORS, write yes next to the question "If yes, treated with ORS?"

SESSION 3: A PROTOTYPE RECORD KEEPING SYSTEM

Purpose:

Trainees will review a record keeping system developed for use in community nutrition projects. The system can be simplified or expanded, depending on the need for information and the educational level of project workers.

Time: 1/2 hour

Materials:

- Copies of "Prototype Record Keeping System"
    1. Road to Health Chart
    2. Family Record
    3. Daily Activity Log
    4. Community Report
    5. Charts for Data Analysis
    6. Summary List of Program Records and Reports

Steps:

1. Distribute the "Prototype Record Keeping System." Explain that CEDPA has used this basic system in programs in Nepal and Kenya. The important characteristics of the system are:
    - It is designed to collect only the information required to monitor and evaluate specific project objectives and activities.
    - Each level of record keeping leads to the next.
    - Records are designed to help the mother, worker and manager analyze and use the information on them to analyze and improve their efforts.

2. Review each element of the "Prototype Record Keeping System," beginning with the "Road to Health Chart." (The "Road to Health Chart" can be substituted for by a simple card on which arm circumference or weights are recorded.)

    Discuss:

    - Characteristics of each form
    - Who completes it
    - What is done with it
    - Examples of how it is filled out and how information on it can be used to identify problems and progress

3. The final page of the "Prototype Record Keeping System" lists, in diagram form, the project's records and reports, by whom they are completed and who keeps or receives them. Review this with trainees.

4. Summarize: The record keeping system presented in this session focuses on documenting project activities and results. Each project should develop its own system for record keeping and reporting. This prototype system demonstrates the need for:

   - Simplicity
   - Limited data collection
   - Data related to problems and interventions
   - Collection and analysis of data by those who need it to make critical project decisions

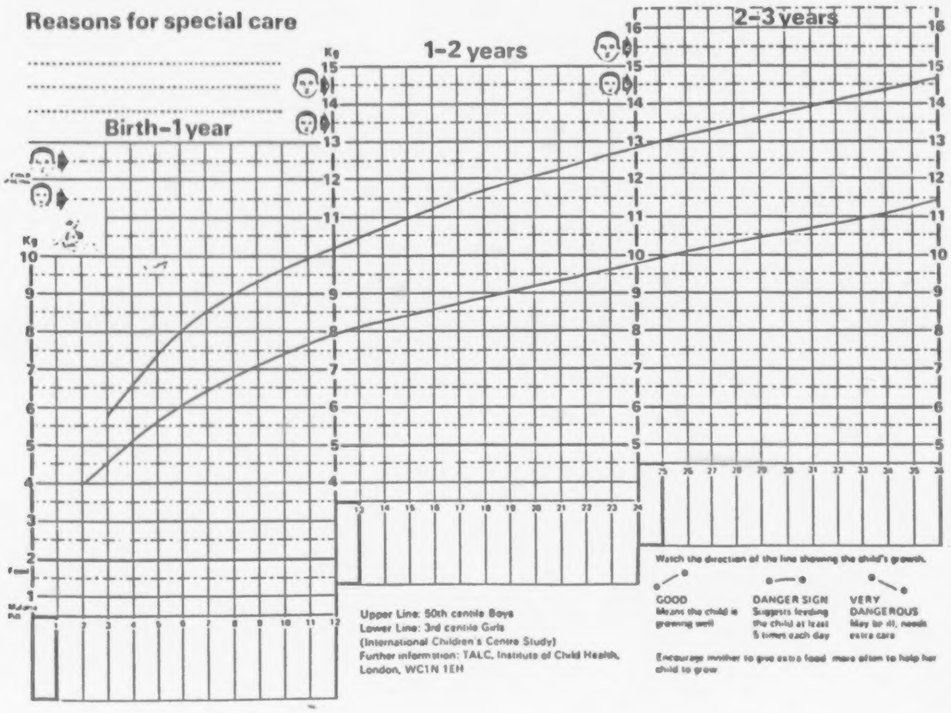
HANDOUT

PROTOTYPE RECORD KEEPING SYSTEM

1. Road to Health Chart
2. Family Record
3. Daily Activity Log
4. Community Report
5. Charts for Data Analysis
6. Summary List of Program Records and Reports

1. Road to Health Chart

A Road to Health Chart with basic information about nutrition, immunization status and illness is completed for each child. This chart is put in a plastic envelope and given to the mother. The mother brings her children's cards with her to each growth monitoring activity.



2. Family Record

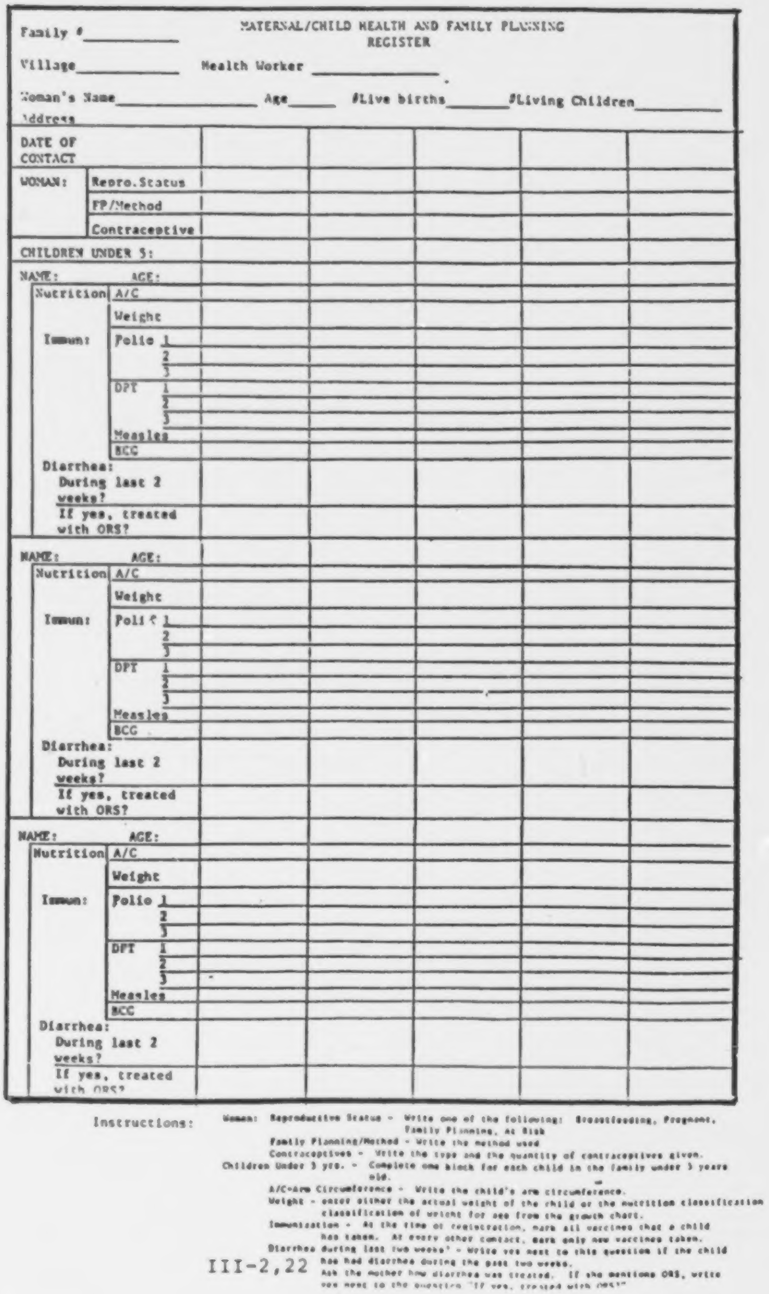
Village health workers or volunteers keep a record on each family in their area. The information recorded on the card is directly related to the specific program's objectives.

For example, if prevention of diarrhea is a priority objective, information about the occurrence of diarrhea, distribution of ORS packets and home treatment may be routinely collected. For nutrition status, the measurements and cutoff points used by the program would be recorded, i.e., arm circumference less than 12.5, between 12.5 and 13.5, or greater than 13.5, or red, yellow, green.

The advantage of this type of family record is that it displays priority information about each child and mother in chronological order. We can see, at a glance, what has happened to the nutrition and immunization status of a child, the family planning acceptance of the couple, etc.

The Family Record can be printed on heavy paper and kept as a card. Or, it can be printed and bound as a register. A sample Family Record is illustrated on the following page.

2. Family record



Family #__________

MATERNAL/CHILD HEALTH AND FAMILY PLANNING
REGISTER

Village__________ Health Worker __________

Woman's Name__________ Age____ #Live births_____ #Living Children_______

Address

DATE OF CONTACT							
WOMAN:	Repro.Status						
	FP/Method						
	Contraceptive						
CHILDREN UNDER 5:							
NAME: AGE:							
Nutrition	A/C						
	Weight						
Immun:	Polio	1					
		2					
		3					
	DPT	1					
		2					
		3					
	Measles						
	BCG						
Diarrhea: During last 2 weeks?							
If yes, treated with ORS?							
NAME: AGE:							
Nutrition	A/C						
	Weight						
Immun:	Polio	1					
		2					
		3					
	DPT	1					
		2					
		3					
	Measles						
	BCG						
Diarrhea: During last 2 weeks?							
If yes, treated with ORS?							
NAME: AGE:							
Nutrition	A/C						
	Weight						
Immun:	Polio	1					
		2					
		3					
	DPT	1					
		2					
		3					
	Measles						
	BCG						
Diarrhea: During last 2 weeks?							
If yes, treated with ORS?							

Instructions: Woman: Reproductive Status - Write one of the following: Breastfeeding, Pregnant, Family Planning, At Risk
Family Planning/Method - Write the method used
Contraceptives - Write the type and the quantity of contraceptives given.
Children Under 3 yrs. - Complete one block for each child in the family under 3 years old.
A/C=Arm Circumference - Write the child's arm circumference.
Weight - enter either the actual weight of the child or the nutrition classification classification of weight for age from the growth chart.
Immunization - At the time of registration, mark all vaccines that a child has taken. At every other contact, mark only new vaccines taken.
Diarrhea during last two weeks? - Write yes next to this question if the child has had diarrhea during the past two weeks.
Ask the mother how diarrhea was treated. If she mentions ORS, write yes next to the question "If yes, treated with ORS?"

III-2,22

3. Daily Activity Log

Workers, dispensaries/clinics keep a daily record of special project services and activities. At the end of each month, these daily records are used to complete the monthly report.

Example:

Date	Type of Activity	Description/Results

4. Community Report

Information for the Community Report is taken directly from family records and the daily activity log.

Village __________ Month ________
Worker __________

NUTRITION STATUS

1. Total children less than 5 years in village/area ________
2. Total children less than 5 years in area with growth card ________
3. Total children less than 5 years weighed/assessed this month ________
4. Total children gaining weight from last month to this month ________
5. Total children malnourished:
    - Severe ________
    - Moderate ________
6. Total children receiving:
    - Follow-up home visit ________
    - Clinic referral/treatment ________
    - Food supplement ________
    - Vitamin A supplement ________

DIARRHEA ORS

7. Total children with diarrhea this month ________
8. Total children treated with ORS ________

IMMUNIZATION

9. Total immunizations given:

Polio 1 ________
2 ________
3 ________
DPT 1 ________
2 ________
3 ________
Measles ________
BCG ________
Tetanus ________
____

FAMILY PLANNING

10. Total women of reproductive age in village/area ________
11. Total women using a family planning method: ________
    - Pills ___
    - Condom ___
    - IUD ___
    - Sterilization ___
    - Natural Family Planning ___
    - Breastfeeding(child < 6 mos.) ___

INVENTORY CONTROL

12. Item:	Amount at beginning of month	Distributed	Received	Stock end of month
Growth cards				
Vitamin A capsules				
Food supplements				

COMMUNITY ACTIVITIES

13. This month: (List individually)	Date	No.Attending
- growth monitoring sessions - education/demonstration sessions - special projects		

5. Charts for Data Analysis

Supervisors and managers keep information from village reports on separate charts in order to track progress and identify problems.

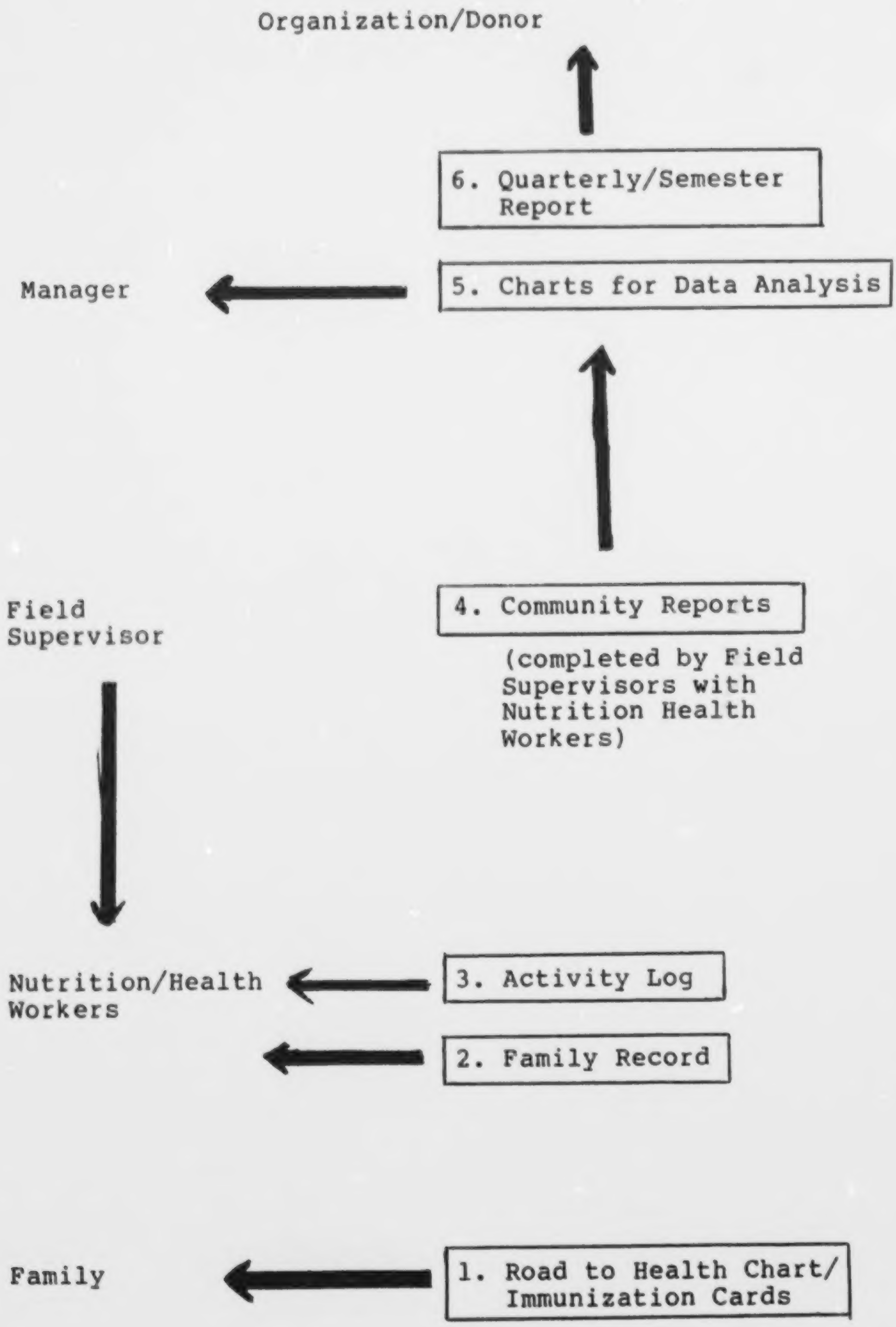
Charts can be made to compare activities and results in the same village over time. They can also be made to compare activities and results in several villages.

Examples:

1. Nutrition Status and Activities	Months		
1. Total number of children in village	____	____	____
2. Total number with growth cards	____	____	____
3. Total number weighed/assessed each month (a)	____	____	____
As a percent of total children (#1 above)(b)	____	____	____
4. Total number gaining weight each month	____	____	____
5. Total number malnourished each month	____	____	____
6. Activities with malnourished/high risk:			
Home visits	____	____	____
Clinic referral/treatment	____	____	____
Food supplements	____	____	____
Vitamin A supplements	____	____	____

2. Diarrhea Treatment/ORS			
7. Total children with diarrhea	____	____	____
8. Total children with diarrhea treated with ORS	____	____	____
Percent of cases treated with ORS (divide line 8 by line 7 and multiply X 100)	___%	___%	___%

6. Summary List of Program Records and Reports


Organization/Donor
6. Quarterly/Semester Report
Manager
5. Charts for Data Analysis
Field Supervisor
4. Community Reports
(completed by Field Supervisors with Nutrition Health Workers)
Nutrition/Health Workers
3. Activity Log
2. Family Record
Family
1. Road to Health Chart/ Immunization Cards

SESSION 4: EVALUATING ACTIVITIES WITH THE COMMUNITY

Purpose:

Trainees practice facilitating the evaluation of nutrition action projects with members of the community.

Time: 1 hour

Preparation:

Prepare three sets of role play cards: one for a group of 4-5 project facilitators, another for 4-5 observers and the other for the community members (the rest of the participants).

- Facilitators - The facilitators' role is to help the community members assess whether they have been able to carry out the activities planned, whether they reached the people they wanted to reach with these activities and whether there has been any change in nutrition status of young children as a result. (Do not forget to ask "why not?" if the answer is no.) Facilitators should use the information about the project from Sessions 1 and 3, remembering that their goal is for the community to identify problems, causes, possible solutions and courses of action.

- Community Members - Most community members know that their nutrition workers have been weighing children and visiting mothers. The community has been asked several times to contribute to the weaning food component of the project. They are satisfied with the work, but several do not understand why they should keep making contributions to help people who are too lazy to help themselves. One man is upset because his wife is spending too much time out of the home and not earning anything for what she is doing, etc. The nutrition volunteers are part of this group as well.

- Observers - The observers will note how the facilitators present themselves in the meeting and what materials they use to help the community members understand what has happened with the nutrition situation since they started with their project. Observers should note whether facilitators dominate or facilitate a discussion. What might the facilitators do differently?

Steps:

1. Explain that you will conduct a "mock" project evaluation meeting with members of the community.

2. Divide into three groups, assigning and explaining the roles of each group.
3. Give the groups 10-15 minutes to prepare for the role play, then begin.
4. When you have finished (15 minutes maximum) have representatives from each group comment on how they thought the evaluation meeting went. Ask: "Did the facilitators succeed in reaching their goals? How do you think the community members responded when asked to evaluate their own efforts? What did facilitators do to promote the participation of the community? What would you (facilitators) do differently the next time?"

Summarize the lesson and the unit.

UNIT 3

SUPERVISING COMMUNITY NUTRITION ACTIVITIES

SESSION 1: The Role of the Supervisor

SESSION 2: Identifying and Solving Problems

SESSION 3: Problem Solving/Role Play

SESSION 4: Planning and Conducting Supervision Visits

SESSION 1: THE ROLE OF THE SUPERVISOR

Purpose:

1. Analyze past experience as a subordinate and as a supervisor.
2. Define the functions of supervision in nutrition improvement programs.
3. Discuss the characteristics of community workers and volunteers that affect supervision.

Time: 3 hours

Materials:

- Handout - "Supervisors I Have Known"
- Handout - "Supervising Volunteers"
- Flipchart and marking pens

Preparation:

Review handouts and prepare questions for discussion.

Steps:

1. Introduce the topic of supervision by brainstorming the functions of program supervisors. Add the following points, if they are not mentioned:
    - Direct and control program activities
    - Provide support and encouragement to workers
    - Provide on-the-job training
    - Monitor program activities
    - Contact and share information with village leaders and other administrative officials
    - Motivate staff and volunteers
    - Set an example
    - Reinforce work of subordinates
    - Identify outside technical and financial assistance, if necessary
2. Distribute the Handout - "Supervisors I Have Known" and ask participants to read and answer each question.
3. Divide into two work groups. The task of each group is to share its answers to the first and second questions on the handout, then to develop a group list of the characteristics of an effective supervisor.
4. When groups finish, ask them to write their descriptions on the flipchart and to present them to the group.

5. Comment on the similarities and differences in the groups' definitions and add the following points, if they are not mentioned. An effective supervisor:

   - Has a good understanding of the job of the worker/volunteer
   - Listens
   - Cares about the worker/volunteer
   - Helps the worker/volunteer improve
   - Looks at performance, not personality
   - Gets the facts before making a decision
   - Gives feedback
   - Is specific about tasks to be performed
   - Is open and communicative
   - Motivates through words and actions

6. Return to work groups. Ask work groups to share their answers to questions 3 and 4 on the handout about their own strengths and problems as supervisors.

7. Assign each group the task of designing a short role play to illustrate one or two of the problems they have encountered as supervisors of people and activities. Groups should choose problems that several of them have in common. (Allow 20 minutes for preparation of role plays.)

8. Work groups present their role plays.

9. After each role play, ask participants to summarize the problems presented. List them on the flipchart.

10. Lead a discussion based on the problems presented in the role plays. Possible questions to stimulate discussion might be:

    - What are the causes of each supervision problem?
    - What are the skills supervisors must have to overcome and avoid these problems?
    - What kinds of support and training do supervisors need to overcome these problems?

11. Discuss the characteristics of workers/volunteers that affect how supervisors approach and work with them. These include:

    - Often unpaid
    - Low level of basic education
    - Short training in nutrition
    - Different motivations for becoming workers/volunteers
    - Age
    - Sex
    - Etc.

12. Distribute the Handout - "Supervising Volunteers," and discuss the differences between supervising volunteers and paid workers. Emphasize ways to motivate volunteer workers:

- Giving positive feedback, praise
- Working with them
- Helping them improve and acquire new skills
- Etc.

13. Summary: In this session, participants reviewed the functions of supervisors of community nutrition and health activities. They listed the characteristics of effective supervisors, and they discussed common problems faced by supervisors. The sessions that follow will help supervisors develop problem-solving, planning and communication skills needed for effective supervision.

HANDOUT

SUPERVISORS I HAVE KNOWN

1. When a supervisor inspires you to perform a job well, what does the supervisor do?

   The supervisor ______________________________

   ____

   ____

2. How would you describe your ideal supervisor?

   My ideal supervisor is a person who ______________________________

   ____

   ____

   ____

   ____

3. If you have been or are a supervisor of people or activities, what are the things you like about your style of supervision? ______________________________

   ____

   ____

4. What problems have you encountered as a supervisor?

   ____

   ____

   ____

   ____

HANDOUT

SUPERVISING VOLUNTEERS

The following chart compares the characteristics of leaders in volunteer organizations and in organizations with paid staff. These characteristics often determine the role and the approach of a supervisor.

	Characteristics of Leaders	Volunteer Organizations	Organization With Paid Workers
1.	Leader/supervisor salaried?	No	Yes, Paid a salary
2.	Subordinate/worker salaried?	No	Yes, Paid to perform tasks
3.	Consequences for the worker if work is not completed	Not severe Not financial	Worker could lose job and salary
4.	Duration of job	Volunteers often want only short-term responsibility	Paid workers want long-term assurance of job
5.	Goals	Usually agreed to & set by all	Usually set by top management
6.	Leadership style	Manager must "consult" volunteers; works with them	"Tell"; "sell"; "direct"
7.	Authority	Comes from the followers	Comes from above
8.	Personality	Dynamic, charismatic personality often required	Dynamic personality helpful but not critical
9.	Expertise of supervisors/ leaders	Generalists- wide range of people and technical skills	Specialists
10.	Job orientation	Must be people oriented	Task and/or people oriented

SESSION 2: IDENTIFYING AND SOLVING PROBLEMS

Purpose:

Participants will identify and suggest ways to solve common problems encountered by village supervisors. These might include low community participation in nutrition activities, high worker and beneficiary drop-out, continuing high rates of malnutrition and other related problems.

Time: 1-2 hours

Materials:

- Handout - "Supervision Problem" exercises 1, 2, 3
- Chalkboard and chalk
- Flipchart or several large pieces of paper
- Marking pens

Preparation:

Several examples of common supervision problems are attached to this session plan. Trainers should adapt these examples or develop new problem descriptions based on situations identified by project supervisors.

Steps:

1. Introduction: Problem solving is a basic function of all supervisors. Ask trainees to think about the problems that they have faced, or will face, when supervising village nutrition workers and volunteers. Write the examples given by participants on the chalkboard.

2. Review these basic steps in problem solving:

   - Identify the problem and its causes
   - Identify the people who will most likely be involved in solving the problem
   - Discuss ways to solve the problem with them
   - Agree on a plan of action
   - Obtain resources, if necessary
   - Take action
   - Evaluate to see if the problem has been solved or if additional action is needed

3. Exercise: In this exercise, trainees are asked to work with specific problems that they might face as supervisors. For each problem, they will think about what they need to know about the causes of the problem before taking action.

   Then they will brainstorm the types of actions that might help to solve the problem.

4. **Part A:** Distribute or read Part A of one of the problem exercises to the participants. Give them five minutes to think about and write the answer to the question:

"How will you find out what is causing this problem?"

When they finish, ask several trainees to read their answers. Write key words or phrases from their answers on the chalkboard. Continue until no new answers are given. Suggest additional items and sources of information that you feel are important.

5. **Part B:** Distribute or read Part B of the exercise to trainees. Part B gives more details about the actual causes of the problem. It also asks trainees to suggest different actions that could be taken to help workers and supervisors solve the problem.

Divide trainees into small work groups and ask them to read and complete Part B of the exercise together. Ask groups to write their suggested actions on large pieces of paper for presentation to the rest of the group. When work groups finish their presentations, suggest additional activities and approaches to solving the problem.

6. Group Work

- Give different problem exercises to each group (Part A only). Ask groups to read and answer the questions in Part A.

- When groups finish Part A, distribute Part B of each of the problem exercises for completion.

- When all of the groups finish, ask each one to present its problem. Their presentations should include:

  - The problem
  - Whom they went to
  - What they did to determine the causes of the problem
  - The causes
  - The actions they will take as supervisors to help workers solve the problem

- Encourage the other trainees to ask questions and make suggestions after each group's presentation. Discuss the difficulties supervisors might have in solving each type of problem and whom they might ask to help them.

SUPERVISION PROBLEM: EXERCISE 1

Part A

PROBLEM: Low level of community participation in nutrition activities.

(**Village**) has a population of approximately 540 children under 5 years. Nutrition workers have been active in the village for the past 6 months. According to their reports, 500 children have been registered in the village growth monitoring activities. However, the participation of children at the monthly weighing sessions has been very low. Less than 30 percent of the registered children came to the weighing sessions during the past month.

QUESTIONS: How will you find out what is causing this problem? Whom will you talk to? What will you observe?

Part B

MORE INFORMATION:

During your investigation, you found that there were several reasons for the low attendance at monthly weighing sessions:

- One of the five locations that should have monthly activities had not held a weighing session for the past two months. One of the workers responsible for this location has been sick; the other cannot read or write.
- Mothers in this village complain that they have no time to attend weighing sessions. They are busy in their gardens and cannot spend a full morning waiting for their children to be weighed.
- You also found that the last month's report from the village was incorrect. Attendance was actually 40 percent, not 30 percent.

ASSIGNMENT: Make a list of the actions you might take to help solve these problems.

5. Summary

In this session, participants have identified ways in which they might identify the causes of specific supervision problems. They have also begun to think about the possible actions supervisors could take to help workers and volunteers solve these problems.

In the next session, participants will conduct a simulated meeting with the people who might be involved in the solution of the problem. The purpose of this meeting will be to discuss the problem and agree on a plan of action for its solution. In preparation for the simulated meeting, ask participants to:

- Decide which of the problems discussed in this session they will discuss during the meeting
- Decide who should be invited to participate in the meeting and where it will be held

Note: In several training programs, we noted that trainees had difficulty identifying appropriate ways to find out more about the problems. When confronted with a problem of low community participation, for example, they often selected upper-level community officials to discuss the problem with or pass the problem to. Encourage trainees to work with those affected by the problem - the beneficiaries, as well as their leaders and officials. Where women are expected to participate in activities, but men are the community's official leaders, the needs and expectations of the women are often not considered unless they are consulted directly.

SUPERVISION PROBLEM: EXERCISE 2

Part A

PROBLEM: High community volunteer drop-out

Fifteen Community Nutrition Volunteers were trained in early 1984 in (village). The last reports you received for this village showed that only five volunteers are currently active. Volunteer activities in this village are very low.

QUESTION: How will you find out what is causing this problem? Whom will you talk to? What will you observe?

Part B

MORE INFORMATION:

After talking to the active and inactive volunteers, to the clinic staff and to the local supervisor, you find that there are several reasons for this problem:

- Volunteers are frustrated by the lack of support from village leaders and the clinic. After training, volunteers began working very actively to register all the children in the village. They had been told during their training that they should carry out demonstration feedings at every weighing session and that they would be given a small fund to help with the expenses of this activity. When the funds did not arrive, they asked the village chief for help. He sent them to the clinic, but the nurse knew nothing about funding for the activity and told them that funding for the demonstrations was the responsibility of the village. The village development committee suggested that the volunteers raise funds for their own activities.
- In the beginning, volunteers spent their own funds and donated foods for the demonstration feedings on weighing day. This was very expensive, so they discontinued the demonstrations.
- When the volunteers stopped giving food to children at the weighing sessions, the mothers became angry. Many of them did not bring their children to be weighed. Many of the volunteers simply stopped working at that time.

- Local supervisors were aware of this problem but did not know whom to ask for help.

ASSIGNMENT: Make a list of the actions you would take to help solve this problem.

SUPERVISION PROBLEM: EXERCISE 3

Part A

PROBLEM: Continuing high rates of malnutrition

(Village) started nutrition activities last year. So far you, the supervisor, have received three reports from the village workers. The first report showed that 5 percent of the children in the village were severely malnourished and that 45 percent were moderately malnourished. The last report from the village showed that 5.3 percent of the children were severely malnourished and 49 percent moderately malnourished. You are concerned about this increase and you wonder why the situation is not improving in this village.

QUESTION: How will you find out what is causing this problem? Whom will you talk to? What will you observe?

Part B

MORE INFORMATION:

When you visit this village you find that:

- Village workers are active but their skills are very low. Most of them can fill out the growth cards, but none can interpret the growth curve.
- After observing the weighing activities in two locations, you find that workers are not counseling the mothers of "high risk" children on an individual basis. They say they were not taught to do this in their training.
- Five of the ten active workers are new replacements for workers who are no longer active. They have not received formal training.
- Workers refer severely malnourished and sick children to the nearest clinic. But the clinic is far away, and many families do not take their children for treatment.
- This is a very poor area. Families must work very hard to produce enough food for their families. In fact, most families do not have enough food to meet their needs for the entire year.

ASSIGNMENT: Make a list of the actions you would take to help solve these problems.

SESSION 3: PROBLEM-SOLVING/ROLE PLAY

Purpose:

In this session, trainees practice problem solving and communications skills by conducting a simulated meeting. During the meeting, **supervisors** discuss a problem with the individuals who could be involved in its solution.

Time: 1/2 hour

Materials:

- One "Supervision Problem" description selected by trainees
- Chalkboard and chalk

Preparation:

- Ask trainees to select one of the supervision problems discussed in the previous session.
- Ask trainees to decide whom they might invite to a meeting to discuss this problem.

Steps:

1. Introduce the session by explaining the purpose stated above. Review the specific problem to be discussed in the role play meeting and its possible causes.

2. Write the following objectives for the meeting on the chalkboard:

   - To give everyone involved a chance to discuss the problem
   - To discuss possible ways of solving the problem
   - To agree on actions to solve the problem and who will take them

3. Ask two trainees to play the roles of the supervisors who are conducting the meeting. Give them ten minutes to plan how they want to conduct the meeting.

4. Assign the roles of the other individuals invited to the meeting to the rest of the trainees. Give them ten minutes to think about the attitudes and skills of the people they will play in the role play.

5. Conduct the role play. (Allow 15-20 minutes)

6. Conduct a discussion about the process and the results of the role play meeting. You may want to use the discussion questions on the next page:

Ask the two **supervisors** who conducted the meeting the following questions:

- Which of the meeting's objectives were achieved? Which were not achieved and why?
- How do they feel about the results of the meeting?
- How did they feel about the other trainees during the meeting?
- What would they do differently in a future problem-solving meeting?

Ask the trainees who attended the meeting, and those who observed it, to give their comments:

- How do they feel about the results of the meeting?
- How did they feel during the meeting?
- Did they have the chance to say what they wanted to say? If not, why not?

7. Based on their experience in the role play exercise, ask trainees to list the characteristics of an effective problem-solving meeting. These might include:

   - The purpose of the meeting is explained and understood by all
   - Everyone has an opportunity to express his/her opinion
   - Realistic alternatives for solving the problem are discussed
   - Participants respect and try to understand each other's opinions
   - Specific actions to be taken are defined
   - Tasks are assigned
   - Follow-up is scheduled

8. Congratulate the participants for their performance in the role play exercise. Review the steps for effective problem-solving mentioned in Session 1 of this unit.

SESSION 4: PLANNING AND CONDUCTING SUPERVISION VISITS

Purpose:

In this session, trainees identify activities that might be part of regular supervision visits to workers and communities with on-going nutrition projects. They also review a supervision form that could be used to plan and record the results of supervision visits.

Time: 1 hour

Materials:

- Handout - "Supervision Visits"
- Handout - "A Supervisor's Checklist"
- Flipchart and marking pens

Steps:

1. Introduction: Supervision is an important part of project management. Supervisors monitor work in progress, help workers/volunteers to solve problems and provide new technical and programmatic information.

2. Ask trainees to describe a productive supervision visit to observe a community worker or group involved in an on-going nutrition activity. What does the supervisor do? What are the activities during the visit? How does the supervisor assess the workers, volunteers, others? You may want to use a role play or dramatization to illustrate a productive and an unproductive supervision visit.

3. Divide into work groups, and ask groups to brainstorm lists of the things they will want to observe and questions they will want to answer during supervision visits to communities.

   Make sure that the following are included in their lists:

   - Questions about planned and completed activities
   - Questions about results of completed activities
   - Observation about the workers' knowledge and skills
   - Observation of worker's contacts with families (especially families of sick and malnourished children) with pregnant women, community leaders and others
   - Review of program records and reports

4. Distribute the Handout - "Supervision Visits." Compare the trainees' lists of possible questions and activities during supervision visits with those on the handout.

5. Distribute the Handout - "A Supervisor's Checklist." Discuss the need to both plan for and record the results of supervision visits. This handout is only one example of many different types of forms that could be developed to guide supervisory visits, and to record the actions taken and those planned by supervisors. A form of this type also makes it possible for the supervisor-of-supervisors to assess his/her work with field workers and community groups.

6. Role Plays: Practice planning and conducting supervision visits to community nutrition workers through role plays. The following situations might be used:

   - Several volunteers in this village have recently stopped participating in monthly weighing activities. The supervisor visits several of the volunteers to find out why and to encourage them to continue working with the monthly nutrition activities.

   - The supervisor's objective is to assess the follow-up activities that workers are conducting with high-risk children. What will the supervisor do during the visit? What information will she need? How will she check the accuracy of that information?

   - The supervisor has observed that workers have great difficulty filling out the Road to Health Chart. During this supervision visit, she wants to work with them to improve their skills in this area.

   - The supervisor observes that weaning food demonstrations are carried out regularly by nutrition workers. However, the recipes they are teaching mothers to prepare require foods that are not available to families, unless they are purchased in the market. During this supervision visit she will try to solve this problem.

   After each role play discuss:

   - The problem the supervisor faced
   - How the supervisor organized the visit to achieve her purpose
   - What the supervisor did to help workers solve their problems
   - What skills the supervisor needed to solve the problem
   - What the other trainees would have done differently

7. Ask trainees to summarize what they have learned in the session. Discuss remaining concerns and possible topics for future training session dealing with supervision.

HANDOUT

SUPERVISION VISITS

Project supervisors make many visits to workers and communities to check on the progress of activities, the knowledge and skills of workers and many other aspects of project operations and performance.

To be effective:

1. A supervision visit should be planned in advance based on specific needs and objectives.
2. The supervisor must have prepared him/herself for the visit.
3. The visit must assess progress made towards solving problems identified in past visits, while identifying new strengths and weaknesses in performance.

Planning/Problem-Solving: During the supervision visit, the supervisor should help workers assess completed activities, plan for activities in the coming months, identify any problems that are occurring and plan for the solution of those problems.

Motivating/Giving Feedback: An important part of the supervisor's job is to encourage and motivate the workers to carry out their tasks effectively. In community programs where many workers are volunteers, encouragement and praise for work well done are important incentives for continued participation. Volunteers, as well as salaried workers, will also appreciate suggestions of ways to improve their efforts, if the advice is realistic and constructive.

Assessing Skills: Supervisors should assess workers' technical and interpersonal skills through observation. This may be done by conducting activities (growth monitoring, home visits, education sessions, etc.) with workers during a supervisory visit.

Reporting: In many programs, supervisors assist community/ workers complete and/or compile reports of their activities and results.

In-Service Training: Supervisory visits should be used whenever possible to provide workers with new information and to upgrade their technical and interpersonal skills.

Follow-Up: Actions that will be taken by the supervisor and the workers to solve existing problems should be clearly defined during the visit. After the visit, supervisors and workers should follow through by carrying out the actions that have been agreed upon. During the next supervisory contact, the supervisor should follow up with the worker, upon giving feedback on the progress and actions that have been taken.

Supervisors are always limited in the amount of time they can spend with individual workers or communities. While all of the areas above may be of concern to supervisors, individual visits should be focused on one or two priority issues. For example, during one month, supervisors may be most interested in assessing workers' skills, the next, they may be asked to conduct in-service training on a topic that workers are finding difficult.

HANDOUT

A SUPERVISOR'S CHECKLIST

Worker/Group Name________________ Location________________

Name of Supervisor__________________ Date________________

	Plan	Results
1. Purpose of the visit		
2. Problems or issues remaining from the last visit that should be discussed		
3. Information or issues that have come to your attention since the last visit that should be discussed		
4. Activities planned during visit with village workers		

5. On-the-job-training planned during the visit Topic: Materials required:		
6. Official visits and meetings		
7. Problems raised by the village workers during the visit		
8. Problems observed by supervisor during visit		
9. Follow-up required		

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